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ON THE COVER Just out of Chicago Union Station, a Metra commuter train swings west on the BN line (see page [illegible]). Walters Foster photo. **BELOW** In Blue Island, IHB SW1500's cross the Calumet Sag Channel on one of the massive bridges that mark this hot spot (see page [illegible]).

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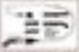

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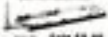

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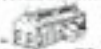

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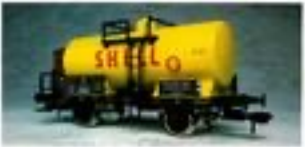

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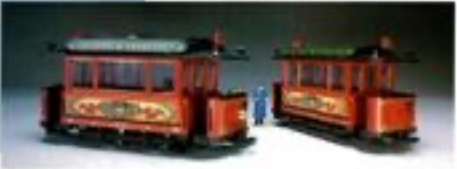

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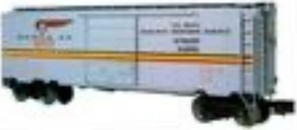

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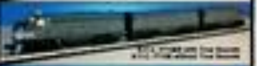

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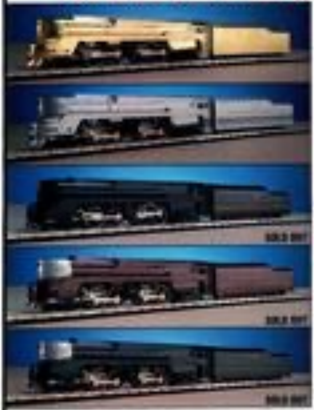
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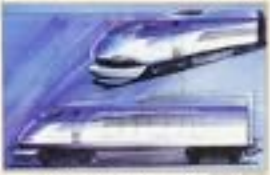

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PREPUBLICATION OFFER · THE B&O RAILROAD

[illegible]

[illegible]

RAILROAD NEWS

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] ■

Timeline

[illegible]

Robert B. Claytor: A railroad champion

[illegible]

Robert B. Claytor

[illegible]

Grif Teller: Calendar artist extraordinaire

[illegible]

Grif Teller

[illegible]

[illegible]

A new thoroughbred for Amtrak

[illegible]

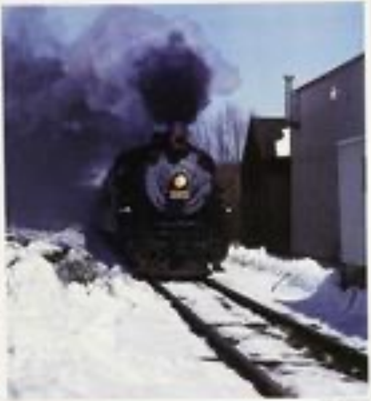
Before heading for [illegible] April [illegible]

◆ Short line [illegible] excursion [illegible] Great Western [illegible] on March [illegible]. The two round trips from [illegible], Calif., [illegible] on the other end of the train.

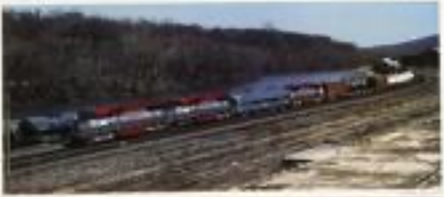
◆ New short line: [illegible] Western Railway [illegible] March 21, [illegible].

◆ New short line: [illegible] & [illegible] operates between [illegible], Pa., and [illegible] Mills, [illegible] December [illegible] April [illegible], Pa., [illegible] crosses [illegible] Creek with [illegible] cars for [illegible] Mills.

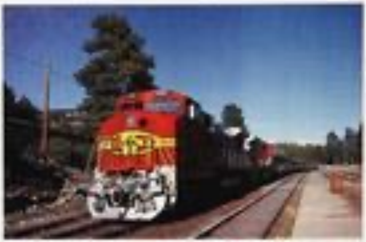
▼ On March [illegible], 1993, New York, Susquehanna & Western's Chinese-built 2-8-2 No. 142 made a smoky sight on eight round trips from Cortland to Marathon, N.Y. The trains ran to Marathon's annual Maple Festival.

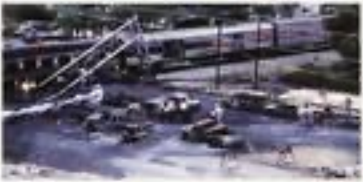


▲ When a [illegible] at GM's Test Center near Pueblo, Colo., GM's SD70M demonstrators hit the road. The trio and test car were on Conrail's [illegible] at Hollidaysburg, Pa., on March 21, 1993, before testing their radial trucks on the curves of Conrail's South Fork Branch near [illegible], Pa.



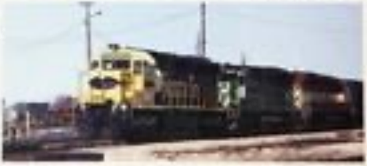
A rare sight at the South Rim of the Grand Canyon is a Santa Fe [illegible] train, [illegible] on March [illegible], [illegible]. A pair of [illegible] hauled the train of [illegible] cars over the Grand Canyon Railway, a [illegible] former Santa Fe branch [illegible] between Williams and the canyon as a tourist railroad.





This was the scene after the fiery, fatal [illegible] between Tri-Rail's [illegible] and a gasoline truck in Fort Lauderdale, Fla., on March [illegible] (page [illegible], [illegible] Trains), in which [illegible] and the truck driver died.

A Wisconsin Central [illegible] the [illegible] getting [illegible] from Santa Fe [illegible] is [illegible] renumbering them [illegible], [illegible] their headlights, and plans to repaint all [illegible] this year. [illegible]



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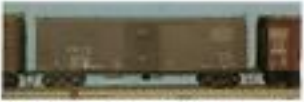
REBUILT 40-FOOT USRA BOX CARS

Using Tichy's Kits to Build HO Models

By Richard Hendrickson

Nearly every railroad used special parts to rebuild the original USRA box cars from the Thirties so they could last into the Fifties. Here are some of the prototypes for the Tichy injection-molded plastic kit and methods to make the kit a more precise match for the prototype.



The finished model was painted, lettered and weathered to represent P&LE #[illegible] in October 1947, just after being reweighed and restenciled. The lower height of the rebuilt USRA car, as compared to the 1937 standard AAR box car coupled next to it, is readily apparent. — Model and photo: Richard H. Hendrickson.

The Tichy Train Group has recently introduced an HO scale freight car kit representing a USRA single-sheathed box car as rebuilt in the 1930s with steel-sheathed sides. To simplify assembly of the model, the sides and roof are molded in one piece, and the basic body is completed by cementing the floor and ends into place. Doors, underframe and an impressive array of separately molded detail parts are then added to complete the model.

Prototype Background

In the early 1930s, the Youngstown Steel Door Company developed prefabricated car sides for use in rebuilding and modernizing older wood-sheathed box and auto cars. These were shipped from Youngstown's Cleveland plant as a single unit, with framing and sheathing pre-assembled, so they were relatively easy to install. When combined with existing underframes, running gear and [illegible] ends, plus new roofs and doors, these side units made it possible for the railroads to convert obsolete rolling stock into modern cars at their own shops at a fraction of what it cost to purchase new cars.

Youngstown's new idea couldn't have come at a better time. With the country's economy in a shambles following the 1929 stock market crash, the railroad industry was struggling to survive. Many lines were in receivership, and purchases of new freight cars had declined to no more than a few thousand cars a year.

Under these circumstances, rebuilding existing equipment made good economic sense. It required much smaller capital expenditures, kept shop employees on the job [illegible] and offered tax advantages as well. Before long, carbuilders such as Pullman-Standard began marketing their own prefabricated box car sides, but Youngstown remained the principal supplier of car side assemblies for rebuilding older cars through the World War II years and the 1950s.

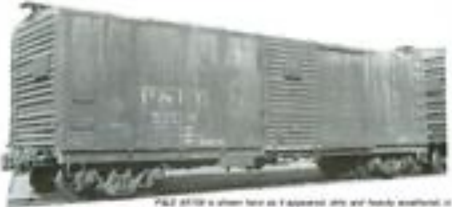
By the 1930s, thousands of box cars dating from the World War I era were prime candidates for rebuilding, since their wood body sheathing was deteriorating but their steel underframes were still going strong. A sizeable percentage of these cars were United States Railroad Administration standard box cars; [illegible] each of the single wood-sheathed [illegible] and double-wood-sheathed [illegible] USRA cars had been built under government contracts between 1918 and 1920 and assigned to a large number of railroads in all parts of the country.

The rebuilding of these USRA cars in the 1930s and '40s was covered in detail by Martin Lofton in the April [illegible] issue of "**The Journal**." As Martin pointed out, some railroads kept the original height of the USRA cars, but many others increased the height to from [illegible] feet to [illegible] feet [illegible] inches so the cars were comparable in cubic capacity to the new box cars being built at that time. In addition, the rebuilt cars varied a lot in side sheathing, roofs, doors and other components, so no two groups of rebuilds were exactly alike.

PMcK&Y/P&LE Rebuilds

The Tichy kit represents a car of about [illegible] inside height with Murphy panel steel roof, eight-panel sides and the straight center sills of the 40-ton USRA single-sheathed design. The only prototype cars which exactly matched this description were [illegible] cars of the Pittsburgh, McKeesport & Youghiogheny, a subsidiary of the Pittsburgh & Lake Erie (itself a subsidiary of the New York Central System), which were rebuilt from USRA single-sheathed box cars in [illegible] at the P&LE's McKees Rocks shops near Pittsburgh.

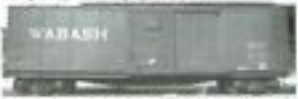
The first [illegible] cars, assigned NYC lot number [illegible], were rebuilt in [illegible]; a photo of the first car in the series was used in Youngstown's advertising and appeared in the 1937 *Car Builders' Cyclopedia*. An additional [illegible] cars in lot [illegible] were rebuilt in [illegible]. As rebuilt, these PMcK&Y cars had Youngstown corrugated doors, AB air brakes and Ajax geared hand brakes, in addition to new sides and roofs. Their original USRA [illegible] Andrews T-section trucks and top-operated type D couplers were retained. The USRA [illegible] corrugated ends were also retained.



P&LE 85100 is shown here as it appeared, dirty and heavily weathered, in 1948. The paint and lettering date from the early 1940s, at which time the reporting marks were changed from PMcK&Y to P&LE (the "NYC system" herald with black background was used from 1935 to 1945). The car was reweighed and restencilled in October, 1947, with the data painted over the resulting from a previous reweighing. — Bob Lorenz collection.

with single (4) corner panels added at the top to accommodate a modest increase in height. Individual grabirons were used on the sides instead of ladders.

Numbered in the 81000-81999 series, these cars bore PMcK&Y reporting marks when first rebuilt. Beginning around 1935, however, they began to be restencilled with P&LE reporting marks (and often, at the same time, repainted). By the end of 1947, 919 of them were shown in the Official Railway Equipment Register being on the P&LE roster, while only 44 cars were still lettered for the PMcK&Y (the others having apparently been written off as damaged beyond repair).

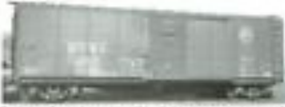


Wabash 82109 was rebuilt not from a USRA double-sheathed box car but from a car built to modified USRA specifications in 1922. Consequently it had 7/8 ends and Vulcan trucks, as well as a 40-ton underframe with fishbelly center sills. Rebuilt in the mid-1930s, it was photographed at Los Angeles in 1953. — photo Bob McVay

Most of the PMcK&Y/P&LE rebuilt USRA box cars remained in revenue service through the 1950s. Their age, together with their obsolescence in an era of roller-bearing trucks and cushion underframes, began taking its toll, and all of them were gone from the active roster by the late 1960s, though some survived longer in maintenance of way service.

Other Similar Prototypes

Several other railroads owned rebuilt USRA box cars that were similar in dimensions and general appearance to the PMcK&Y/P&LE cars. All of these were rebuilt from 40-ton double-sheathed cars, however, so they had different underframes with fishbelly center sills and thus can't be modeled with a stock Tichy kit. The roof overhangs on the double-sheathed cars were also slightly longer than on the single-sheathed USRA box cars, though that is a subtle difference that wouldn't be very noticeable in HO scale. These other prototypes are described below.



The Detroit, Toledo & Ironton's 11000-11799-series cars, rebuilt from USRA double-sheathed box cars, were similar in dimensions and appearance to the PMcK&Y 50-ton rebuilds except for their underframes and their unusual door racks.

Cars in the series equipped with racks for automobile engine loading. — Ed Hawkins collection.

Nonetheless, in some cases, the modifications required to model them accurately with the Tichy kit are relatively simple.

The Wabash rebuilt some box cars, numbered in the 82000-83111 series, that had the same eight-panel sides, panel-end roofs and early style 7-rung Murphy corrugated doors used on the PMcK&Y cars. They weren't rebuilt from USRA box cars, however, but from post World War I copies of the USRA double-sheathed design. As a result, they not only had 40-ton underframes with fishbelly center sills, they also had two-piece 7/8 corrugated ends instead of their [illegible] ends, and they were equipped with Vulcan rather than Andrews trucks.

To model these Wabash rebuilds, the Tichy underframe would have to be reworked and the ends cut into sections and rearranged, modifications that wouldn't deter an experienced kitbasher but might overtax the patience of a novice modeler. The Vulcan trucks wouldn't be a problem, however, as [illegible] has recently added [illegible] Vulcans to its line of HO scale trucks.

Like the Wabash cars, the CGW box cars rebuilt by the Detroit, Toledo & Ironton in 1956 were former double-sheathed cars with fishbelly center sills. These cars, numbered in the 11000-11599 series, also had a roof of unusual design with 15 closely spaced [illegible] ribs and two small stiffening ribs pressed into each roof panel. Modeling these would involve building a new roof for the Tichy kit, as well as modifying the underframe (but the ends and trucks supplied in the kit would be correct).

Another group of rebuilt USRA box cars with similar dimensions was the Elgin, Joliet & Eastern's 7300-7799 series. As former double-sheathed cars, they also had fishbelly underframes with fishbelly center sills. The ends and roof in the Tichy kit would be correct for these cars, but the sides and doors would present a problem, as the sides on the EJ&E cars had 10 [illegible] panels, not eight, and the doors were a three-panel Creco design that would have to be scratchbuilt. Making these changes is possible but certainly not easy, and wouldn't be worth the effort since [illegible] Models offers an accurate [illegible] kit for the EJ&E 7300 series cars.

Building the Model

For the most part, the model shown in the photos was built from a stock Tichy kit, following the assembly process that's well described in Tichy's detailed and adequately illustrated instruction sheet. Where the kit provides optional parts — ends with or without added ribs at the top, for example, and either Apex or vertical staff hand brake — I followed the prototype photos. I also made a number of minor changes and additions which are detailed below.

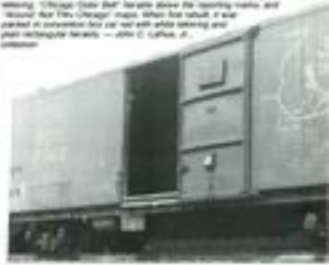
Though Tichy's operating door arrangement is cleverly designed, I dispensed with it and cemented the doors in place, as I find that working doors seem [illegible] and potentially [illegible] handling of the finished model. I also found that the doors in the kit didn't exactly duplicate the doors applied to the [illegible] cars and though I couldn't correct all of the discrepancies, I fixed what could easily be changed.

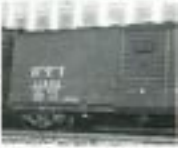
This included extending the door top ribs with pieces of 1 x 2-inch styrene [illegible] and [illegible] to shape, eliminating the [illegible] below the top ribs, and replacing the later style starting levers with early ones that had curved lever guides (these were formed from wire staples). I also made new placard boards from sheet styrene and located them higher up on the doors. I then used the placard boards intended for the doors on the ends.

Using the drilling jig supplied in the kit, I drilled holes in the sides for separate grabirons and then relocated the grabiron holes in the ends so they would line up with those on the sides. As the kit ends don't include the overlapping roof seams at the top, I made some by [illegible] lengths of .005-inch styrene [illegible] and attached them with C.A. [illegible] (Styrene cement is a no-no for this purpose, as it will partly melt the plastic and the rivets will disappear. Don't even ask how I found this out.)

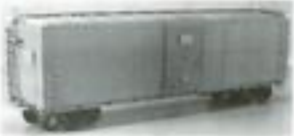
Like most car kits, this one doesn't include uncoupling levers, but they're easily added. I shaped a pair of them from .012-inch wire, following the prototype photos, and attached them with Detail Associates eye bolts. I also decided that the plastic roof supports for the running board (part [illegible] in the kit) were unprototypically heavy in appearance, so I replaced them with new parts formed from flat wire [illegible]. The [illegible] bolts and rivets that attach the

Ten-panel sides and Creco three-panel doors render the Elgin, Joliet & Eastern's 7300 series USRA rebuilds difficult to model with the Tichy kit though they were almost identical to the [illegible] rebuilds in dimensions. By the early 1950s, this car sported green paint with gold lettering, "Chicago Outer Belt" heralds above the reporting marks and "Around Not Thru Chicago" maps. When first rebuilt, it was painted in conventional box car red with white lettering and plain rectangular heralds. — John C. [illegible], Jr., collection

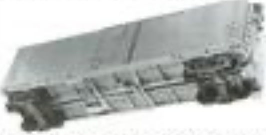




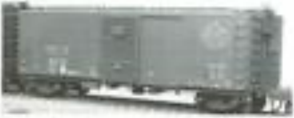
DT&I 11347 was repainted in June of 1957 with black roof and ends and fancy [illegible] and white promotional stenciling. It was otherwise unchanged since its July 1956 rebuilding except that one Andrews truck has been replaced with an AAR cast steel truck. — George [illegible] photo, Charles E. Winters collection



The model is shown here almost ready to be painted (some major modifications to the doors were still to be made). The ends didn't exactly line up with the sides and roof, so acrylic auto body glazing putty was used to smooth the joints. — Model and photo: Richard H. Hendrickson



This view shows the underside of the finished but unpainted model; note the location of the air brake equipment and brake rigging, which follows the prototype car rather than the kit diagram, and the metal shield alongside the AB brake valve. — Model and photo: Richard H. Hendrickson



bottoms, running board supports and such also aren't provided in the kit, so I added a whole lot of rivet-head bolts at the appropriate locations and commercial Detail Associates 2203 NBW castings [illegible] them.

I changed the locations of the air brake components on the underframe so they matched the arrangement of brake equipment on the prototype and made the AB brake valve shield below the side sill on the left side of the car from a 1/2-inch [illegible] and wire staples. Though Tichy provides two different types of [illegible] plastic [illegible] in the kit, neither type is correct for the PM&RR/P&LE vehicles. However, Tichy's [illegible] straight [illegible] are exactly right for these cars, so I used them instead.

Painting and Lettering

Painting the model was easy, as the prototype cars were painted entirely in mineral red. I used Scalecoat's 2017 box car red, as it dries to a glossy finish that's ideal for applying decal lettering.

The decal set that came with the kit was admirably complete, with both PM&RR and P&LE reporting marks and both the "lines" and "cutout" NYC heralds, as well as correct car numbers, weight and dimensional data. In quality, however, it was disappointing; the black "knockout" backgrounds for the heralds disintegrated when I tried to coax them off the backing paper [illegible] doubled up using [illegible] for the heralds instead, and much of the white lettering was fuzzy and poorly printed. Though I used the decals anyway, since I intended to heavily weather my model, I would have considered them unacceptable if I'd been modeling a car with fresh, unweathered paint and lettering.

After the lettering was complete, I [illegible] finished and then airbrushed several layers of dirty gray wash onto the model to give it a heavily weathered look. Repainted patches, restencilling, destination cards and chalk markings, followed by a final coat of clear flat Dull Cote lacquer, finished the job. **RHH**

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Command control roundup

A look at today's multi-train control systems

BY KEITH THOMPSON

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Manufacturers and product names

[illegible]

[illegible] Rail Products Freedom Control

[illegible]

[illegible]

[illegible]

[illegible]

Ready to install or kit?

[illegible]

[illegible]

Current and signal

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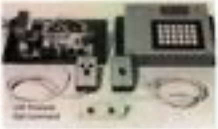

[illegible]

[illegible]

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Channels and throttles

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Throttle channel selection

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Multiple-unit operation

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Receiver channel selection

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[illegible]

[illegible]

[illegible]

Conventional power compatibility

[illegible]

System current capacity and boosters

[illegible]

Signals through thin air

[illegible]

[illegible]

[illegible]

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[illegible]

Overload protection

[illegible]

[illegible]

[illegible]

Receiver size

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[illegible]

Throttle type and function

[illegible]

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[illegible]

Walkaround and memory

[illegible]

[illegible]

[illegible]

Sound

[illegible]

[illegible]

Computer interfaces

[illegible]

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Accessory controllers

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Prices

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Warranties

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Which one's for you?

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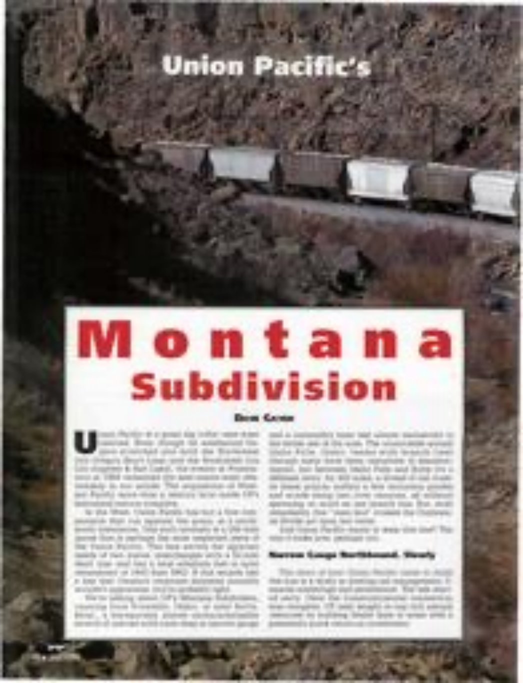

Union Pacific's Montana Subdivision

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[illegible]

Narrow Gauge Northbound, Slowly

[illegible]

[illegible]

[illegible]

[illegible]

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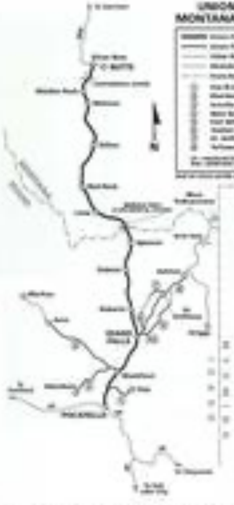
The Competition Begins

[illegible]

UNION PACIFIC'S MONTANA SUBDIVISION



[illegible]

[illegible]

[illegible]

The Jumping Off Place

[illegible]

[illegible]

Ends and Spuds

[illegible]

[illegible]

The Divide Again and Again

[illegible]

[illegible]

[illegible]

End of the Line

[illegible]

[illegible]

[illegible]

Where the Trains Are

[illegible]

[illegible]

[illegible]

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[illegible]

[illegible]

[illegible]

[illegible]

The Locals of the Montana Sub

[illegible]

[illegible]

[illegible]

CREATE YOUR OWN KIT

MODELING CEMENT DEALERS

By Dan Holbrook
Plans by David Prince, Sunshine Graphics

The cement transloading operations and plants are just railroad industries you can duplicate on your model railroad. Here's how two local cement dealers are supplied by the railroad, with plans and possible kit sources for your layout. Plans for the Portland cement manufacturing plant appeared in the May 1992 and May 1993 issues of "The Journal." Photos of the [illegible] Brooks local cement plant near Baltimore, Maryland appeared in the December 1992 issue.

Hydraulic cement, commonly called simply "cement," is a combination of aluminates of lime and silicates. The most common use is for concrete, a mixture of cement, sand, water and gravel or crushed stone. Concrete is used mostly for highway construction, sidewalks, poured foundations, bridges and many buildings.

The most common cement is Portland cement. Portland cement consists mostly of hydraulic lime and is so named because it resembles a natural limestone found on the Isle of Portland in England.

Cement is manufactured by crushing limestone or limestone-type material and further grinding it into a powdered form in combination with water. This mixture is then heated in a draft or rotary kiln, and the resulting dry powder is bagged or shipped in bulk. This is a very simple explanation of the cement manufacturing process. The complete process will be covered at a later date.

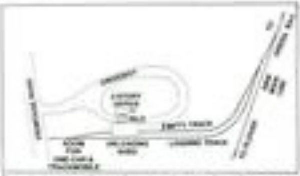
Cement transloading facilities came into being during the late '60s and early '70s. Many smaller ready-mix plants were discontinuing the use of railroad-delivered cement. The cost of purchasing individual carloads of cement, sand and gravel continued to increase to the point that it was no longer cost-effective to receive single carload shipments.

A number of Portland cement manufacturers began to develop centralized transloading facilities at which central locations [illegible] cement via rail in multiple car shipments and unloads the cement into a small silo. A truck loading facility is located adjacent to the silo. These trucks deliver the cement to ready-mix plants and construction sites. Instead of each location receiving cement by rail, only one location was needed for receiving cement, and each plant ordering cement could order the amount needed, large or small. Two plants are pictured in the article: [illegible] Cement at Green Bay, Wisconsin, and Lehigh Cement at Plainfield, Illinois. Both plants are basically the same with slight differences.

1) Lehigh Cement, Plainfield, Illinois

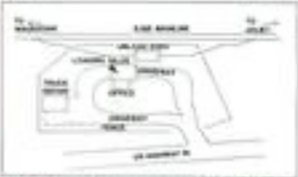
Lehigh Cement's transloading facility is located along the Elgin, Joliet & Eastern Railroad in Plainfield, Illinois. Plainfield is located about 35 miles southwest of Chicago, making it central to most ready mix and batch plant facilities in the Chicago metro area. Note in the track diagram that this is a run-through facility. Cars are set out on one end, pulled through the dumping building by a car puller, and then placed on the other side.

Lehigh Cement receives cement from the large Lehigh Cement plant at Mitchell, Indiana. This plant is located on the CSXT. Originally, this plant was served both by the Monon and the B&O. Prior to the CSXT mergers, most cars seen at the Plainfield transload facility were Monon cars, mainly cars in the 50000 and 51000 series. After the merger of the Monon into the L&N, and Seaboard System and then CSXT, other types of cars were noted. Even as late as 1992, Monon cars were still


DRIVEWAY
FACTORY OFFICE
SILO
EMPTY TRACK
LOADED TRACK
UNLOADING SHED
ROOM FOR ONE CAR & TRACKMOBILE

Two sidings serve the Dundee Cement plant from the Green Bay & Western mainline.

Below: The north side of Dundee Cement, with the slim, four-story silo at the building on the left.


To WAUKEGAN
EJ&E MAINLINE
To JOLIET
UNLOADING SHED
LOADING SILOS
DRIVEWAY
TRUCK REPAIR
OFFICE
DRIVEWAY
FENCE

A through siding serves the Lehigh Cement plant from the EJ&E mainline.

Lehigh Cement utilizes much larger silos than the Dundee plant, and they have concrete rather than steel supports.

CEMENT DEALERS

predominant at the [illegible] plant, however.

Dundee Cement, Green Bay, Wisconsin

Located on Green Bay's northwest side is the Dundee Cement transload operation. Served by the Green Bay & Western, this location receives cement for Green Bay and the Fox River Valley of Wisconsin. The track arrangement at this plant is two tracks. Cars are set out on one track and pulled by the unloading shed by a trackmobile onto the stub track. Cars are then placed in the unloading shed. When unloading is complete, the trackmobile moves the cars out of the building onto the track adjacent to the track.

On various visits to Green Bay, I have noted a variety of C&NW and predominant (really covered hoppers) at this facility. During my 1991 visit, most of the cars were either 3,000 cubic-foot-capacity Pullman-Standard cars or 2,970-cubic-foot-capacity ACF cars. I am not aware from which Dundee Cement manufacturing plant the cement comes. Prior to my 1991 visit, I had seen early Three-C&NW, CGW and MKT covered hoppers at this plant.

General Information

Once unloaded, the cement is stored in storage silos. Purchase orders are received from many different industries including batch plants for roadway construction, ready-mix plants for general use and building construction sites. Different amounts of cement are needed at each location, thus the cost storage is needed. Also, each location does not have to be rail served, and thus, ordering from a central location allows each industry to order as much or as little cement as needed.

Both facilities have truck loading sheds located on a road that loops around one side of shed and on the other, using a common unidirectional theme. This keeps truck loading orderly and flowing in a constant direction.

Cement Transloading Facilities

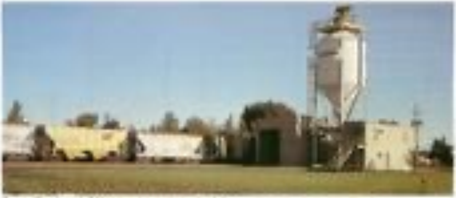
Covered hoppers for cement service are available from a number of model manufacturers. MDC produces a Pullman-Standard Three-covered hopper (similar, kit 14301). [illegible] Works makes a ACF Three-covered hopper (similar No. 1060). The ACF 100-ton 2,970-cubic-foot center flow car is available from McKean Models [illegible] Front Range. The PS-2CD 100-ton

The HO scale Kibri 9802 cement plant is the largest plastic kit, but it is not as large as it looks in this drawing; the locomotive in the photo would be closer to N scale. Any of these three kits could be used for either N or HO scale. This, however, is only one of the three that could serve as a "stand-in" for the prototype transloading facilities.

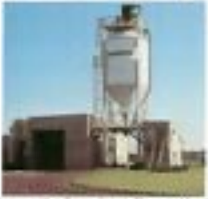
KITS FOR MODELING RETAIL CEMENT DEALERS

The HO scale Heljan 1715 Palumbo Cement Works has a single silo over the truck-loading bay (apparently for sand) with three cement storage silos.

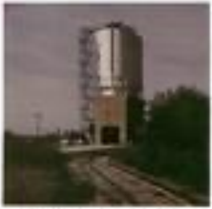
IHC produces this injection-molded kit to build an HO scale cement plant. This, like the Heljan 1715, appears to be plant where cement, sand and water are poured into waiting trucks — a concrete batch plant or ready-mix plant. The prototype structures in this issue are transloading plants to load dry cement into trucks.



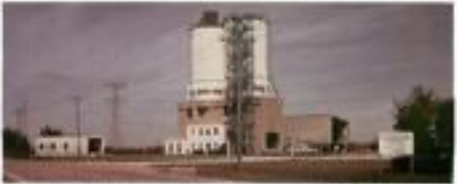
Dundee Cement with C&NW hoppers awaiting unloading.



Looking north at Dundee Cement. The covered hopper unloading shed is to the left, with the truck loading area directly underneath the silo and the office to the right.



Lehigh Cement is located just off the EJ&E mainline near Plainfield, Illinois.



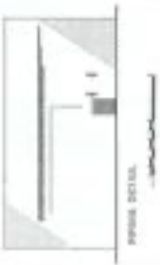
There are no plans for the Lehigh Cement plant, but it serves the same purpose as Dundee Cement, transloading raw cement from railroad cars to trucks.

CEMENT DEALERS

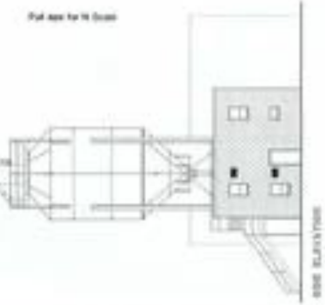
2,800-cubic-foot capacity car is available from Walthers (see the June [illegible] issue of "The Journal").

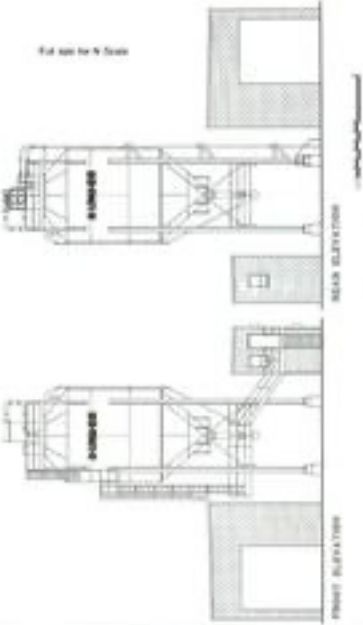
Modeling the buildings could be done a number of ways. The concrete block buildings could be scratchbuilt from Plastruct concrete block sheets (no. [illegible], [illegible] and [illegible]). Various windows and doors are also available from Plastruct. You might also try using the Grandt Line no. [illegible] for [illegible]. The tanks and other building pieces are available from Pikestuff (no. [illegible]) cement [illegible] Kibri (no. [illegible]) and [illegible]. Also, block [illegible] available in the following kits: [illegible] no. [illegible] Hillsborough Cement Co. and no. [illegible] Palmdale Cement Works.

Transloading facilities are normally located near large urban areas and occupy very little layout space. Unlike a large cement plant, a transloading facility is small and a great place to model all those cement hoppers. **[illegible]**



Full size for N Scale




REAR ELEVATION
FRONT ELEVATION

Full size for N Scale

[illegible]

SILVER SOLDERING

For Modeling Brass

by Dave Arnold

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

All Photos by the Author

[illegible]

[illegible]

[illegible]

Quality Craft
WEAVER

MUSEUM QUALITY THAT YOU CAN AFFORD

[illegible] the Pennsylvania Railroad.

[illegible] into the 1950's.

[illegible] its incredible detail.

[illegible] certificate of authenticity.

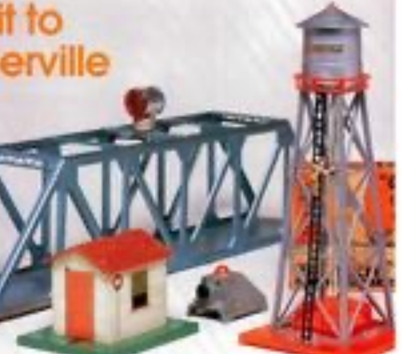
FEATURING

- All-Scale Body Construction
- Constant Voltage Headlight
- Illuminated Tender Marker Lights
- Illuminated Boiler Marker Lights
- Illuminated Pilot Deck Marker Lights
- Operating Front and Rear Knuckle Coupler
- Operates On O-31 Track with any AC Transformer
- Precision DC Can Motor
- Sprung Drivers
- Real Coal Load
- Flywheel Coasting Drive Train
- Available in Two Cab Numbers
- Operating Smoke Unit
- Limited Production Run
- Each Unit Serial Numbered
- DCRU™ Reverse Unit by
- QS 1™ Sound Compatible

QSI

WEAVER MODELS
EXPERIENCE THE BEST IN MODEL RAILROADING
177 Wheatley Ave., Northumberland, PA 17857

A visit to Colberville



[illegible]

The Colber Corp. wasn't afraid to challenge Lionel in the toy train market

BY ROGER CARP
PHOTOS BY CHRIS BECKER AND DAVE FRARY

TAKE A QUICK GLANCE at the toy train accessories pictured here. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

CLAROMA
OIL GUSHER
CONSTRUCTION KIT
CORPORATION

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

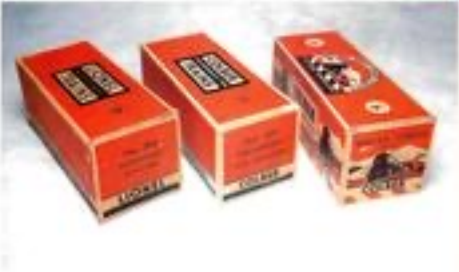
[illegible]

COLBER
TRAINS

COLBER

[illegible]

[illegible]



[illegible]

A TUG ON THE LION'S TAIL

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Adding trees and roads to our Pennsy layout

BY DAVE FRARY
PHOTOS BY THE AUTHOR

[illegible]

Poly fiber background trees

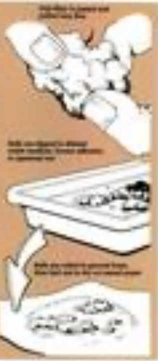
[illegible]

Add polyballs
and foam putty
to your bag of tricks

[illegible]

Highlighting and color variations

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

Three kinds of evergreens

[illegible]

[illegible]

[illegible]

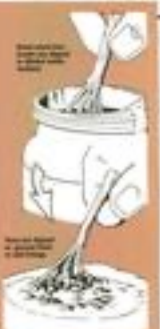
[illegible]

[illegible]

Fun with foam pots

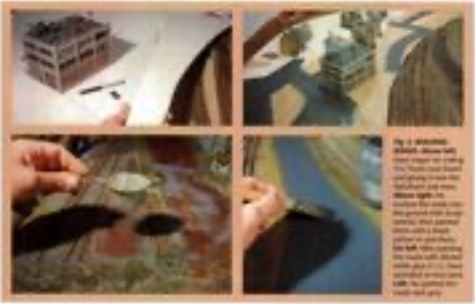
[illegible]

[illegible]



[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

MODELING MODERN INTERMODAL

Gunderson Bulkhead Double-Stack Car: Detailing with Plano Parts, Jigs and Patterns

by David A. Bontrager

Photos by the author

B[illegible]

[illegible]

2 – [illegible]

1 – [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Sea-Land

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

MAERSK

'Happy birthday dear 911'

[illegible]

M[illegible]

'Happy birthday dear 911'

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

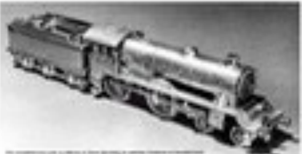
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

LNER 'Hunt' Class 4-4-0

An early vintage 4mm scale EM kit constructed and photographed by Tony Wright

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

L N E R

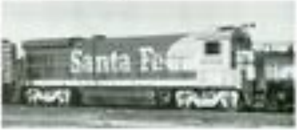
[illegible]

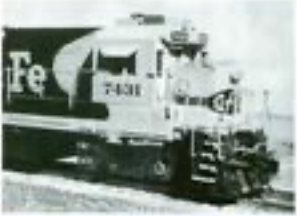
ATHEARN/RAIL POWER PRODUCTS

G.E. B23-7 as Santa Fe 7431

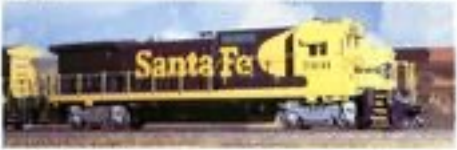
model by Dana Stark
prototype photos from the collection of Louis A. Marre
Model photos by Robert Schleicher

Rail Power provides the body and chassis to fit Athearn U28B trucks and drive components. Detail Associates and Details West make the parts to duplicate the specific Santa Fe details. This, then, is a "kit" build-up to the masters, from several firms' parts and pieces.





BILL OF MATERIALS
Athearn
5800 undecorated U28B
For chassis, trucks and handrail stanchions
Detail Associates
4002 Headlight
1501 Cut levers
1508 MU hoses
1803 Antenna
2202 Grabirons
1504 Coupler lift bar
Details West
138 Rotary beacon
227 Snow plow
198 Air conditioner
Kadee
20 Couplers
Rail Power Products
B23-7 improved body kit
Smokey Valley
111 Truck sideframes
Paint
Railroad 43 Erie Lackawanna Yellow
Scalecoat 14 Santa Fe Blue
Decals
Microscale 87-39



[illegible]

Brass engine rebirth

Restore veteran brass steamers to top performance

BY JEFF JOHNSTON
PHOTOS BY THE AUTHOR

[illegible]

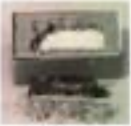


Fig. 1 PACKING PROBLEMS. [illegible]

Setting up shop

[illegible]

Packaging problems

[illegible]

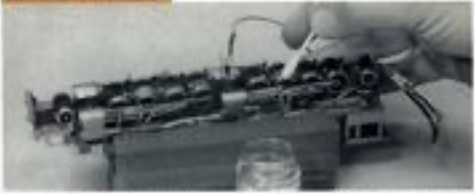


Fig. 1. WHEEL CLEANING. [illegible]

[illegible]

Electrical path

[illegible]

Wheel cleaning

[illegible]

Motor tune-up

[illegible]

Lubrication

[illegible]

Fig 3 [illegible]

Fig 4 [illegible]

[illegible]

[illegible]

[illegible]

Fig 5 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Universal connection

[illegible]

Chassis checks

[illegible]

[illegible]

[illegible]

Simple sketches help keep track of the parts

[illegible]

[illegible]

Driver quartering

[illegible]

Other improvements

[illegible]

Fig. 14 QUARTERING. [illegible]

[illegible]

Northern Pacific rebuilt wood reefers in N scale

Build two versions using Micro-Trains cars

BY SCOTT SEEKINS

[illegible]

[illegible]

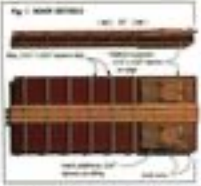


Fig. 1. [illegible]

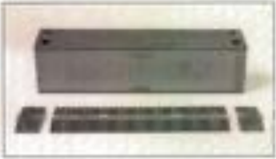


Fig. 2. [illegible]

[illegible]

Painting and final details

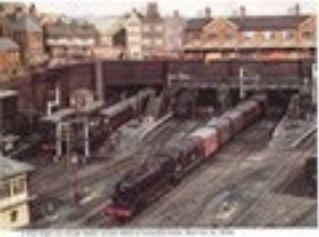
[illegible]

Bill of materials

[illegible]

[illegible]

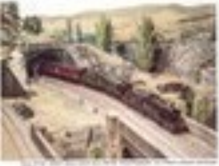
[illegible]



[illegible]

Hebden Junction

LM Region in the Fifties, portrayed in OO scale



[illegible]

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[illegible]

[illegible]

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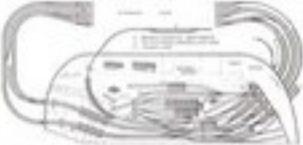


[illegible]

[illegible]

[illegible]

BERLINER TT-BAHNEN
U.S.A.

Is TT on the rebound?

The modeling scale born in Indiana may be coming home

BY JIM KELLY

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

An interesting first layout

The Kanawha Creek Ry.

A small HO scale railroad that includes nearly 50 years of armchair designing and planning

[illegible]

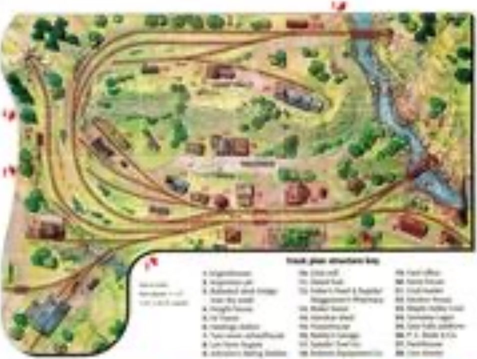
BY CARL CASCONE

PHOTOS BY THE AUTHOR

A [illegible]

[illegible]

[illegible]



Track plan structure key

- 1. [illegible]
- 2. [illegible]
- 3. Ballasted deck bridge over dry wash
- 4. Freight house
- 5. [illegible]
- 6. Hastings station
- 7. Two-room schoolhouse
- 8. [illegible]
- 9. [illegible]
- 10. Grist mill
- 11. Diesel fuel
- 12. Fisher's Feed & Supply/ Waggoner's Pharmacy
- 13. Water tower
- 14. Handcar shed
- 15. Pumphouse
- 16. [illegible] Garage
- 17. [illegible] Fuel Co.
- 18. [illegible] Equipment Co.
- 19. Post office
- 20. Farm house
- 21. [illegible]
- 22. Section house
- 23. [illegible]
- 24. [illegible]
- 25. [illegible] platform
- 26. [illegible] & Co.
- 27. [illegible]
- 28. [illegible]

Layout at a glance

Name: [illegible]

Scale: [illegible]

Size: [illegible]

Locale: [illegible]

Period: [illegible]

Layout style: [illegible]

Benchwork: [illegible]

Roadbed: [illegible]

Track: [illegible]

Turnout minimum: [illegible]

Minimum curve radius: [illegible]

Scenery construction: [illegible]

Control: [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

The first layout

[illegible]

[illegible]

[illegible]

Construction

[illegible]

[illegible]

[illegible]

Problems and future dreams

[illegible]

[illegible]

[illegible]

VENETIAN BLINDS & BURGLAR BARS
IN N-SCALE!

[illegible]

GOLD MEDAL MODELS [illegible]

ALL MADE FROM RUGGED PHOTOETCHED METAL - IN N SCALE!
LOW COST - EASY TO INSTALL - NO SPECIAL TOOLS REQUIRED

[illegible]

[illegible]

ALCO RS-3 ... NEW ROADNAMES

[illegible]

MODEL DIE CASTING INC. P.O. Box [illegible] · Hawthorne CA [illegible]
[illegible]

Garden Railways

the premier magazine for the outdoor modeler since 1984

Garden railroading can be everything from finescale modeling to just plain fun in the garden. Get it all with **Garden Railways**

•

Scratchbuilding
Kitbashing • Operation
Track and roadbed
Locomotives, rolling stock,
and structures • Realistic
use of plant materials

[illegible]

Garden Railways Magazine

[illegible]

CADRAIL

THE RAILROAD DESIGN GEOMETRY PROGRAM

A complete CAD package for track layout, [illegible]

[illegible]

[illegible]

Sandia Software

[illegible]

Royal Pretender

[illegible]

G[illegible]

[illegible]

[illegible]

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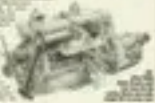
[illegible]



[illegible]

Isle of Man delights

[illegible]

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BODY-MOUNT COUPLERS FOR N SCALE

PART V: MDC 50-foot Box Cars

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

T[illegible]

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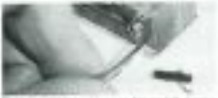
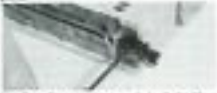
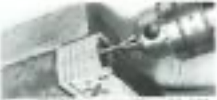
After the upgrading process is complete. You can do it in an evening.



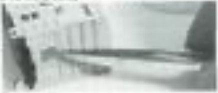
Use an ice pick, an awl or a punch to mark the location of the mounting screw for the Micro-Trains 1023 coupler pocket.



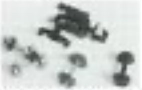
Use the self-tapping screw supplied with the Micro-Trains coupler to mount the coupler pocket while you check the coupler height.



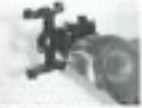
Use a no. 53 drill bit in an electric drill to carefully drill the hole. The hole is located right on the joint between the plastic body and the metal floor so "most" of the hole will find its way into the plastic. Hold the drill firmly so the drill bit doesn't drift into the plastic to drill through the outside of the end of the car.



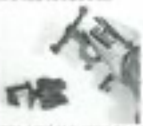
Gently pry off the stock brake wheel and install a Micro-Trains no. [illegible] brake wheel. Use thickened hobby-type cyanoacrylate cement to install the brake wheel.



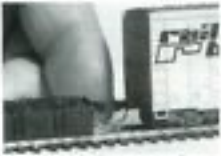
You can improve the appearance of the trucks by replacing the wheelsets with Micro-Trains no. [illegible] low-profile wheelsets. The truck-mounted couplers must be removed to clear the new body-mounted couplers.



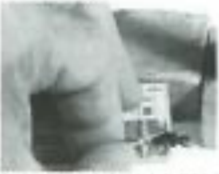
Use diagonal cutters to clip the coupler pocket from the truck. Make two cuts inside the pocket, as shown, so you do not shatter the truck itself.



Make a third cut to remove the last traces of the coupler pocket from the trucks.



Mount the trucks with their press-in pins. Check the height of the coupler and the metal "floor" with the Micro-Trains 1055 gauge. If the coupler is too high, install a piece of .010-inch-thick Evergreen styrene sheet as a shim between the coupler pocket and the bottom of the car.



After the coupler height has been checked and adjusted if necessary, remove the pocket and attach the screw with thickened cyanoacrylate cement as described in the text.

To clean locomotive wheels, use a section of rerailer track connected temporarily to your power pack. Lay a square of single-ply (N scale) or two-ply (HO scale) bathroom tissue over a rerailer track section. Soak the tissue with track cleaner. Hold the locomotive over the track section with only one pair of wheels over the paper. Apply moderate throttle power so the wheels still in contact with the rails will pick up power to spin the wheels, including the pair over the tissue. Move the locomotive so that each pair of wheels is cleaned by the bathroom tissue. Move the tissue each time you clean the locomotive, and replace the tissue when it becomes worn. — [illegible]

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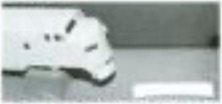
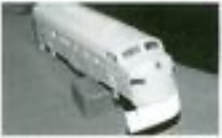
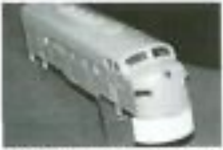


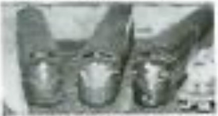
In HO, Atlas, Stewart and Athearn F units all come with the "freight" style pilot. To accurately model those roads that used the "passenger" style (such as PRR and CB&Q), cut a piece of .010-inch styrene sheet slightly wider than the height of the pilot of your model. The piece should be cut long enough to extend from the rear corner of the pilot on one side of the model to the rear corner on the other side.



Using liquid cement for plastics, attach the .010-inch piece right over the existing pilot. Ensure that the piece butts up against the anticlimber; trim to fit around the structure over the coupler. Cement should be applied at the top as the .010-inch sheet is wrapped around, then cement should be applied along the bottom edge.



Allow the work to completely dry. Then the new pilot can be carefully trimmed to the proper contour with a single-edge razor blade or sharp knife.



The step on each side at the lower rear corner can be modeled with thin brass strip attached with cyanoacrylate cement. This modification can easily be applied to a painted model, painting the new pilot to match. — Steve [illegible]

The virtue of patience

Chris Gans believes in it – and his stunning train collection proves good things come to those who wait

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

One corner of the "big room" features trolleys, obscure O gauge, [illegible], and early Standard gauge. It's easy for a train collector to get [illegible] around here!

[illegible]

THE BIG ROOM AND ITS MESSAGE

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

DONE

[illegible]

[illegible]

[illegible]

Now you know why I said "holy cow" when I entered the "big room." [illegible]

[illegible]

[illegible]

[illegible]

HO METAL WHEELSETS

WALTHERS "DOUBLE STACK"

[illegible]

HOTIP!

[illegible]

VILLAGE DEPOT

[illegible]

Do you have a scanner?

You can call for the Compendium of American Railroad Radio Frequencies, 11th Edition on page 76

IMAGINE...

- [illegible]
- [illegible]
- [illegible]
- [illegible]

You can have it all with

LENZ DIGITAL PLUS!

[illegible]

Lenz DIGITAL PLUS

[illegible]

ARRIVING DECEMBER '93. "HO" SCALE

SHOVELNOSES

[illegible]

Challenger Imports, Ltd. [illegible]

Volvo 850 2.0 estate

[illegible]

[illegible] **Top speed** [illegible] **MPG** [illegible]

[illegible]

[illegible]

The Autocar Road Test

What it costs

[illegible]

Specifications

[illegible]

Performance

[illegible]

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Volvo 850 2.0 estate

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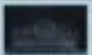

American excellence

[illegible]

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STATE

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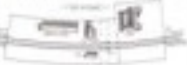
Buildings of character

4mm structures for 'Wetheral'

by [illegible]

Photographs by the author

[illegible]



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BACKDROP SCENERY

by C.C. Crow

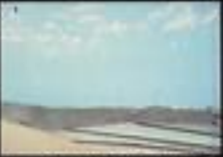
There are many ways to handle backdrops. If you're artistic you can paint yourself a masterpiece. Those less inclined can hire someone, or struggle along on their own. I took some painting classes in college but my style was highly abstract and graphic, so it hardly prepared me for backdrop painting. So I think I fall somewhere in-between. Rick [illegible] had already started the backdrops on Steve [illegible] layout, and since the techniques were purposely kept simple, it was easy for me to step in.

We started off with the idea that we didn't want a masterpiece. All we wanted to do was to create depth with a simple blue sky, a few clouds, mountain ridges and tree lines. I can compare this to the club layout I belong to. It's a mature layout with over half the backdrop complete. It was done quite artistically by a member who is no longer with the club. Indeed he was an artist and what he has done is great. There's a lot of detail, clouds, mountains, the works, but it's only half done. Now that he's gone, we're stuck with the problem of finishing it to match, which is impossible because this person had his own special techniques and skills. He didn't share his knowledge with anyone else in the club. How can you duplicate that? I certainly can't.

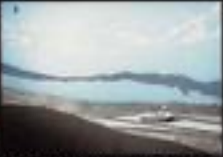
On Steve's layout the story is quite different. The backdrop was constructed with 1/8" masonite securely attached to the walls. The corners were rounded off and the joints were spackled and sanded. They were painted with a flat latex sky blue base coat. It was rolled on with two coats. We did not do it, but lightening the horizon is a good idea. It creates depth and is quite realistic, with just a little additional effort.

The clouds came next. Rick uses torn up sponges to apply the cotton ball clouds. Shading is done with a little black and Payne's Gray artist acrylics mixed in with the white wall paint. It's a fun technique that you can easily master. The body of the cloud is blotted on. Then a little color is added to the lower third of its base. When I did it, I decided that I'd dab it and really cloud it up to the mountains. I started with cotton balls and worked into swirling masses like you see backed up in the hills. If it didn't work, there was always more blue paint. It was sort of like abstract painting. The keys are to stick to your techniques, and to know when to stop. Start with a white body, add grays and shadows below, blending it all together. I used the blue to blot out the mistakes. A spray can of flat white is also useful. It can be used to take the edge off the clouds and blend them together. Use a light touch.

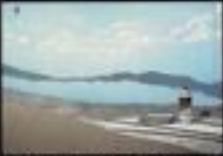
I observed the sky, looking at how real clouds form, and took some color snapshots for a reference which were a big help. I suppose I could go to the library and study up. It's like modeling a box car, the more information we have, the better we can model. But we're actually keeping it pretty simple. We like to mimic the "happy clouds" guy who teaches art on PBS. Happy clouds, maybe one here, another here, wherever you think one should be. I could get into this and figure out how to do those high wispy cirrus clouds, thunderheads and all sorts of things in-between. I asked Steve and Rick if I could paint a sunset, but they threatened to



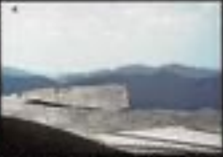
The seascene backdrop has been painted sky blue. The clouds are easy and fun. Rod's done the cotton balls. They are dabbed on with a ragged sponge.



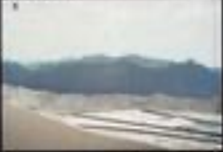
Now the first ridge is brushed on. It's the lightest green.



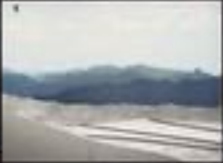
A light misting with a can of flat white primer renders areas farther back.



This should be done in sequence. Here, I'm using a newspaper mask, trying to create a haze in-between ridges.



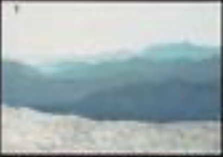
Successive ridges are brushed on, each one a little darker than the last to show depth.



Once all the ridges are in place, step back and critique your work. Is it doing what you want?

take my favorite ones.

Once the sky is complete the mountains come next. Start with the ones farthest away. They will be lighter than the ones up close. We've used a conifer green because we are modeling the Rockies which are covered with fifty year old pines and fir trees. Blue can be added to the farthest ones, representing a haze. To keep things uniform, I've mixed two cans of base paint. I plan to use the darkest color for the closest trees. The other is lighter green which I'll use for the mid-distance mountains. I'll mix a little more white with it to get



The last step will be to add a tree line. 3-D trees will be planted in front of these, so try to match height and color.

Speaking of blue paint, we decided the tree line behind [illegible] Jct. wasn't right.

It was paint out. A lighter ridge line and fewer trees will replace it.

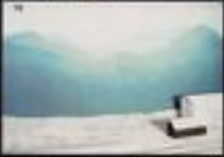
the farthest ridges, and I'll mix a little of the tree color to get the ridges that are closer up. Using a cheap 2" brush, the farthest ridges are painted in first.

Again, we use books and photos that show the area we're modeling to help guide us. The edges of the farthest hills are less defined than the closer ones. The bristles of the cheap brush tend to clump which works nicely for the tree tops. Once the farthest ridge is in place, the next hill is painted on in a slightly darker shade, and so on. The peaks of trees can be larger and more defined. On these hills, they are close enough to see.

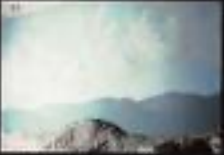
Finally we paint the tree line. We will be planting 3-D trees right in front of these so we want to match the height of what we'll be planting. The tree line is more a shadow of the forest.

There are no rules here, but avoid uniformity. Avoid stair steps, complements and things that don't look natural. The photos will help you out. Don't be afraid of making mistakes. Simply paint them over and start again. We had a problem above Emery. Where the hillside was supposed to stick out, it appeared to go downhill. I used the same technique of progressive layers, this time with the tree lines building up the hillside, getting lighter and smaller. It worked perfectly. I wish I had taken a before photo to show you what a difference this made.

Another technique we like to use is spraying a



I wish I had taken a before shot of this hillside above Emery. It looked like you were peering down into a valley. To correct that, successive layers of trees were built up. Now it looks like the hillside we wanted.

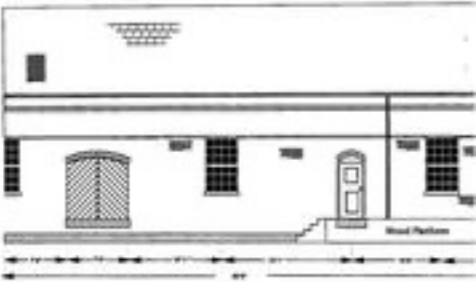


To add some drama, I went a little wild with the clouds in the mountains. There's always more blue paint.

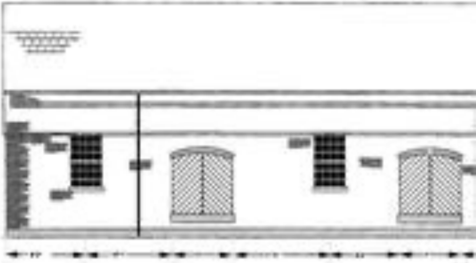
Adds white mist between the layers. This is done to the darkest layer before the next hill or tree line is applied. I used it effectively to create valleys and add distance. It was also applied in the cloudy area.

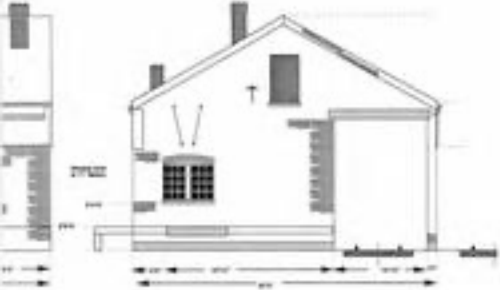
Our idea is to simply suggest these things. There's no fine details, your mind fills that in. What we want to do is let you know we are in the mountains. We don't really want you looking at the backdrop. The action isn't there. We want you to look at the railroad, the tracks, trains, and structures, and you don't have to be an artist to accomplish that.

The haze is behind here. A couple of clouds, some ridges and trees, and we know we are in the mountains. These simple techniques add up to a dramatic scene. It doesn't have to be that hard. All photos by the author.


Wood Platform

ANDOVER MASSACHUSET FREIGHT HOUSE

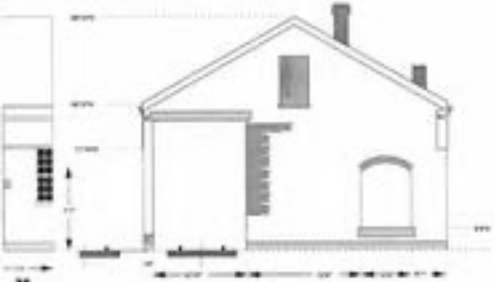




'TS

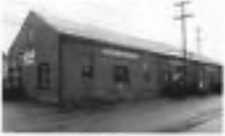
Drawn especially for Mainline Modeller
by Roger [illegible]
Copies may be made for non-commercial use only

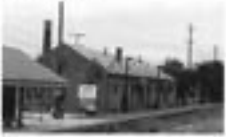
Scale [illegible]mm = 1'

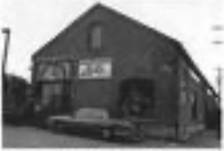


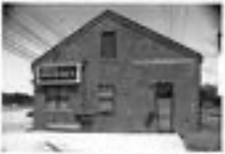
ANDOVER FREIGHT STATION

by Roger Hinman









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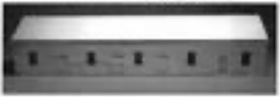

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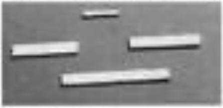

[illegible]

[illegible]

[illegible]

Build a simple HO scale highway bridge

First-prize winner in our "Be an Author" contest

BY CLYDE R. MAYBEE JR.
PHOTOS BY THE AUTHOR

[illegible]

Planning

[illegible]

Roadway

[illegible]

Bill of materials

Atlas Model Railroad Co.
[illegible]

Central Valley
[illegible]

Floquil paint
[illegible]

Plastruct ABS
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Testor's paint
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Woodland
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Miscellaneous
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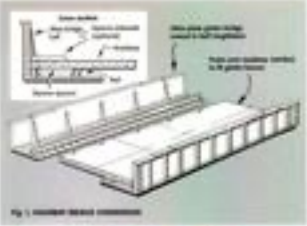

Fig. 1. [illegible]

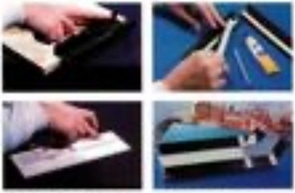

Fig. 2. CONSTRUCTION. [illegible]

Abutments and bents

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Painting and weathering

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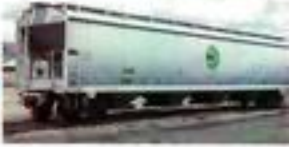
Fig. 3. [illegible]

Trinity Industries curved-side covered hopper

This versatile hopper is a new shape on the rails

BY KEITH THOMPSON
PHOTOS BY CHARLES E. [illegible]



[illegible]

O[illegible]

Covered hopper design

[illegible]

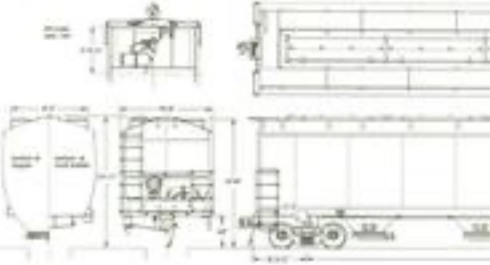
[illegible]

[illegible]

The Trinity car

[illegible]

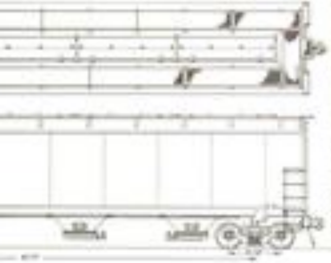
[illegible]



[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

Pennsylvania in miniature

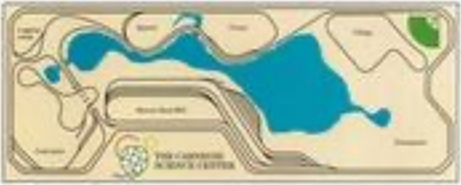
The Carnegie Science Center's O gauge Miniature Railroad and Village is a stunning Pittsburgh seasonal delight

[illegible]

[illegible]

[illegible]

Many features of the Carnegie layout are all new, including this down-to-the-last-rivet-accurate [illegible] model of the [illegible] facility operated by Sharon Steel. This is one impressive scale model, truly a tribute to the industry that put Pittsburgh on the economic map of America.



[illegible]

[illegible]

[illegible]

THE CONCEPT

[illegible]

[illegible]

[illegible]

THAT SCENERY

[illegible]

[illegible]

[illegible]

From the days of the earliest settlers, lumber mills were an integral part in the western [illegible] [illegible] economy. Railroads helped deliver their goods to timber-hungry cities throughout the western United States, and this scene captures that synergy of bygone days.

[illegible]

[illegible]

[illegible]

Some background information

Vintage cardboard backdrops can bring a static display to life

BY JAMES R. FLYNN
PHOTOS BY THE AUTHOR

WHEN THEY SET UP DISPLAYS [illegible]

EARLY EXAMPLES

[illegible]

MARX AND PETER

[illegible]

Marx HO occupies "the other side of the tracks" [illegible] from the [illegible] rural town in this pop-out backdrop by Ideal Aeroplane & Supply Co. of New York City. [illegible] of the 1935 series of backdrops.

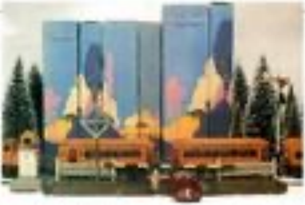


FIG. 1. [illegible] an Art Deco [illegible] by matching the four different panels. Positioned on a shelf behind their trains, the boxes add interest to a display.

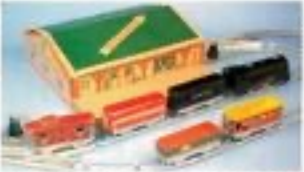


FIG. 2. This Marx mechanical train came in a lithographed box that folds into a freight station. Marx offered a factory of this design, and other scenery and building sets.

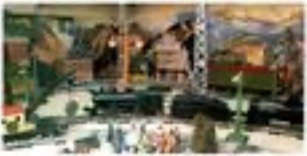


FIG. 3. Collector John [illegible] uses American Flyer Trains O gauge and Ideal Aeroplane & Supply backdrops to create depth without destroying the charm of display railroading.

[illegible] shown in fig. 2.

OTHER FIRMS

A similar set of backdrops was offered by [illegible] of Fig. 3. [illegible]

[illegible]

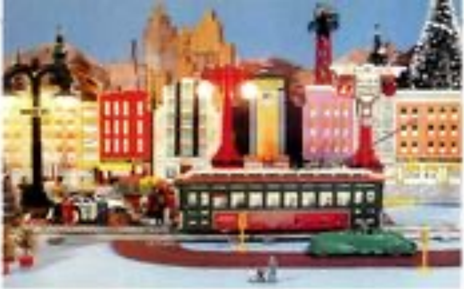


FIG. 3. A Marx 1100 [illegible] trolley pauses to board passengers. The background depth is created by two sets of Bild-Rite scenery, with the brighter one in the foreground.

FIG. 4. A colorful [illegible] by Chad Valley Co. Ltd. of Harborne, England, [illegible] a scene behind this [illegible] collection of Disney items.

made a large array of backdrops and scenery. The train city scene in fig. 3 is created with backdrops from two different Bild-Rite scenery sets. [illegible]

[illegible]

[illegible]

FIG. 5. John Potter created this construction scene with a Lionel train on a shelf in front of a backdrop from an arcade machine. The coin-operated machine, called "Sidewalk Engineer," was made by Williams Manufacturing Co. of Chicago in the early 1950s.

The [illegible] New Mantaras

[illegible]

Used Marcos

[illegible]

The Marcos Mantara Spyder

[illegible]

[illegible]

ROBERT HUGHES

[illegible]

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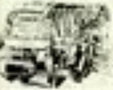
[illegible]

[illegible]



[illegible]

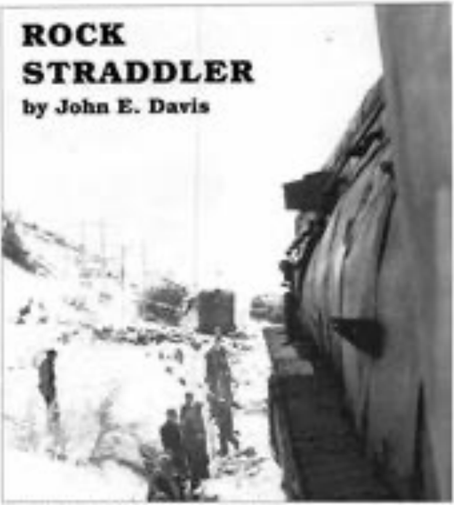
[illegible]

[illegible]

[illegible]

ROCK STRADDLER

by John E. Davis



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

All Photos by the Author

WM PASSENGER CARS

by Russell L. Wilcox

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] from Cumberland.

Trains #1 & 2 ran between Baltimore, Hagerstown and Cumberland. At Cumberland, the train numbers became [illegible] Elkins and [illegible] from Elkins. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

In late [illegible] the Western Maryland applied to the Maryland Public Service Commission to discontinue all passenger service east of Cumberland, Maryland. [illegible] [illegible] Railway Post Office [illegible] Commission [illegible] [illegible] Hagerstown and Cumberland only. Then #1 & 2 then ran only between Baltimore and Hagerstown. In May [illegible],

SEARS ROEBUCK AND CO.

the Public Service Commission of West Virginia allowed [illegible]

In the 1932 [illegible] Western Maryland [illegible]

During 1952, WM purchased [illegible]

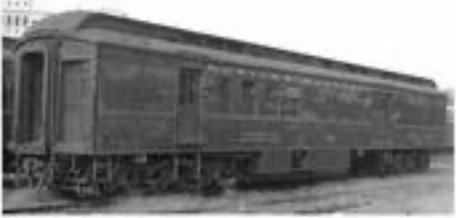
June 1957 marked the end of passenger service [illegible]

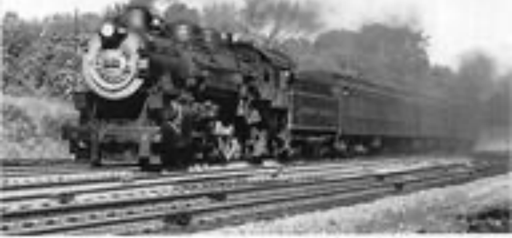
[illegible]

Modeling Notes

[illegible]

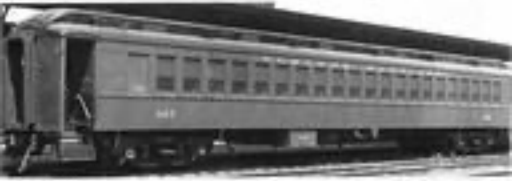
[illegible] marking the end of a [illegible] of passenger-carrying trains on the Western Maryland.

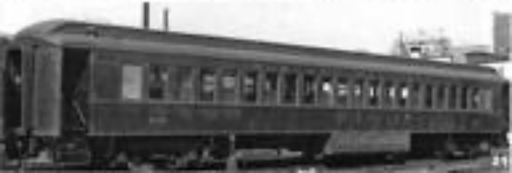




[illegible]

All Photos by the Author





[illegible]

[illegible]

General Electric 'Dash 8!'

[illegible]

UNION PACIFIC "Dash 8-40C" Nos. [illegible] — OMI [illegible]

NORFOLK SOUTHERN "C39-8" [illegible] — OMI [illegible]

CONRAIL "C39-8" [illegible] — OMI [illegible]

BURLINGTON NORTHERN [illegible] — OMI [illegible]

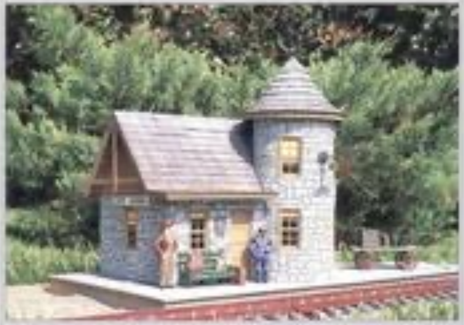
SOUTHERN PACIFIC "Dash 8-B39" [illegible] — OMI [illegible]

UNION PACIFIC "Dash 8-40C" [illegible] — OMI [illegible]

CSX "Dash 8-40B" [illegible] — OMI [illegible]

Overland Models, Inc.

[illegible]



[illegible]

Cape Sarah Station

An inexpensive stone depot with real character

by Roger Baker

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

insulated foam, plastic or acrylic sheets, or plywood would be a different thickness than my blue foam insulation.

Choose appropriate windows and doors, available from several manufacturers. In the interest of economy and time (I would have to buy eight commercial windows and doors), I decided on [illegible] holes. The windows are 4' high by 2' wide and the doors are 6'5" high by 3' wide. Note that the station platform is 2' high, which means that the floor of the building is also 2' from the bottom of the walls.

WALLS

Mark the position of the doors and windows as shown in the drawings. After everything is cut out, the walls can be glued together. I used toothpicks inserted into the foam to give the structure added strength. Be particularly careful to keep the walls square, since the front and right walls do not join. You may want to glue in a floor at this time as an aid to keeping things square. If you do, remember to make a cutout for the tower.

To cut the tower window holes in the PVC pipe, I used a Dremel tool with a cutting wheel. The cutting is not difficult and goes quickly. Remember, any slips or goofs will be covered by the stonework.

At this point, spray the inside of both the main building and the tower with black acrylic paint. Be sure that the paint you use is compatible with your construction materials. Photo 1 shows the model at this point.

STONEWORK

Now it is time for the stonework. There is a variety of embossed-stone sheets available that would be perfect for this project. You could even use brick if you wanted to. But not me, the economical modeler. I did my own stonework. Here's how to do it.

Photo 1 (top): *Foam walls and PVC pipe tower have been cut to size and walls have been assembled. Window holes have been made, and the model's interior has been sprayed black.*

Photo 2 (center): *[illegible] has been applied to the walls, and stone is being carved with a [illegible].*

Photo 3 (bottom): *The roof interior. [illegible]*

[illegible]

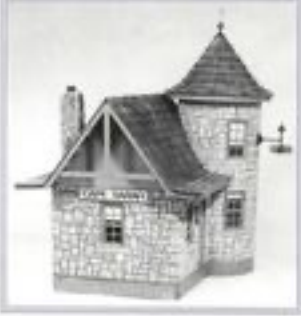
[illegible]

[illegible]

[illegible]

Photo 6 (left): The underside of [illegible] in position.

Photo 7 (below): The finished [illegible]



[illegible]

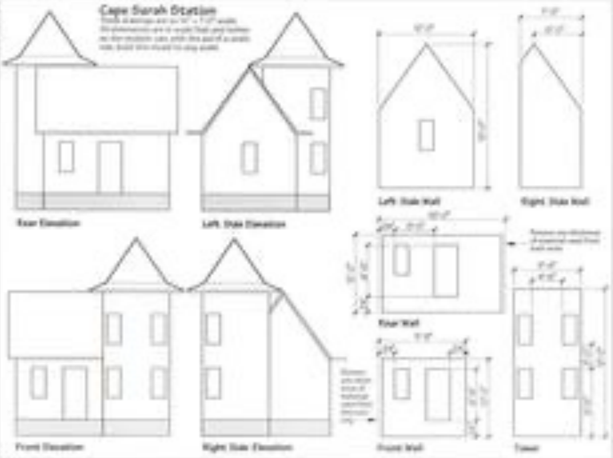
[illegible]

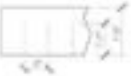
[illegible]

[illegible]

Cape Sarah Station

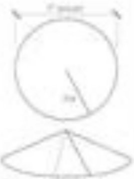
[illegible]


Rear Elevation
Left Side Elevation
Left Side Wall
Right Side Wall
Rear Wall
Front Elevation
Right Side Elevation
Front Wall
Tower



Straight strip

[illegible]



Forming the lower roof

[illegible]

[illegible]

[illegible]

[illegible]

Photo 6: [illegible]

[illegible]

[illegible]

[illegible]

Resources

[illegible]

[illegible]

[illegible]

[illegible]

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Chicago & North Western's ex-Conrail GP40s

Paint a unit in the 1990s [illegible]

BY JAMES [illegible]

[illegible]

Body modifications

[illegible]

[illegible]

Painting

[illegible]

Bill of materials

[illegible]

[illegible]

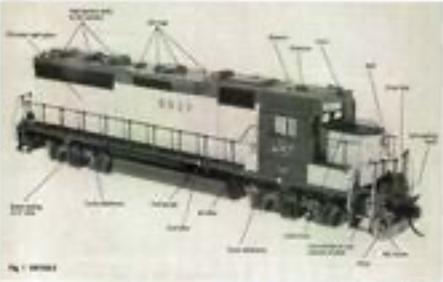

Fig. 1 DETAILS

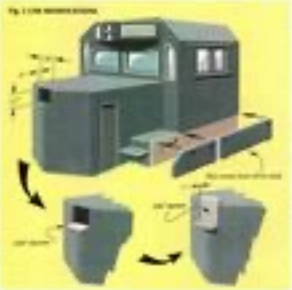

Fig. 2 CAB MODIFICATIONS

shell. The spray makes an excellent base for the bright yellow. I've never had any compatibility problems with two such brands of paint as long as I let the [illegible] dry for about a week.

Then I painted the shell with the [illegible] stripes using [illegible]. After [illegible] I masked the shell with Scotch Magic Transparent Tape. I painted the proper areas CNW Green [illegible] and removed the tape.

I used a brush to touch up areas that needed it, then added the handrails. I brush-painted these with [illegible]. The color difference isn't noticeable. I also [illegible].

Next, I brush-painted the smaller details. [illegible]

The air reservoirs, truck sideframes, [illegible] and [illegible] are black. I added the bell and left it in its natural metal color. I painted the [illegible] and the grab irons [illegible]. Then I added the Kadee [illegible] couplers and hoses.

Decals

[illegible]

[illegible]

Weathering

[illegible]

[illegible]

[illegible]

Final details

[illegible]

[illegible]

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[illegible]

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TEXT AND PHOTOGRAPHY BY GREG BROWN

[illegible]

[illegible]

FOCUS
OREGON

Transition Challenges

[illegible]

[illegible]

[illegible]

[illegible]

W&P's Current Operations

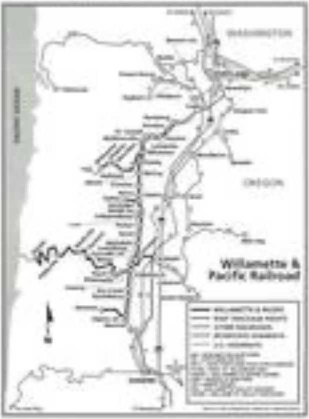
[illegible]

[illegible]

Following W&P

[illegible]

FOCUS
OREGON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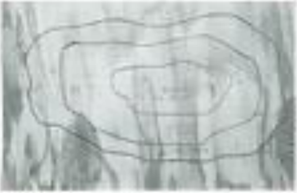
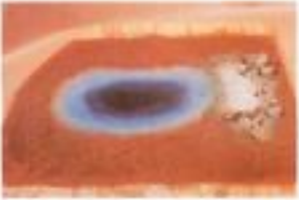
CREATE AN 'INSTANT' LAKE WITH CLEAR CAULKING COMPOUND

By Bob [illegible]

You can add a lake or small stream to your layout with a simple scrap of plywood, plaster, scenery and paint, plus clear caulking compound to make that [illegible] look like the real water.



There are several very good products for simulating water on your layout. While patching a leak in my skylight, I found that clear caulk dries transparent and either smooth or rippled. I'm now an advocate of this medium because it's easy to find and use, inexpensive, easy to clean and looks like water. Shown here is the base board with outline of area to be "water." The inner circle will be the "deep" part. The next ring is a shallow depth, and the outer ring is next to the shore.



Colors should be blended from dark in the center to light at the shore, unless it is to be a river, in which case the middle gets lighter toward each bank. Center is black to dark blue, next ring medium blue to light blue, and outer ring tan to layout ground color. If there is a beach, tan blends with sand. If a shallow rocky shore, small rocks can actually be placed (and seen) in and at the water's edge. Apply caulk generously over the area and smooth with the bottom of a spoon like icing on a cake, dipping the spoon occasionally in mineral spirits (turpentine, paint thinner, etc.) to aid in spreading. Surface may be made calm or choppy. As the caulk sets up (15 minutes to an hour), the surface can be teased to create more waves or surf.

When dry and transparent (it starts out white and opaque) in a day or so, depending on thickness, white caps, waves and turbulence can be dry-brushed on high spots with titanium white acrylic artists paint, obtainable from art supply stores by the tube.

KIT CONVERSION

40-FOOT LINDE BOX/TANK CARS

Use McKean Models Kits to build these cars in HO scale or in N scale with Con-Cor kits.

By John J. [illegible]

[illegible]

Modeling the Linde box/tank cars [illegible]

The [illegible] Cars

[illegible]

The [illegible] Cars

[illegible]

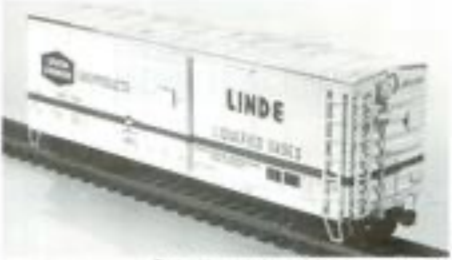
The GATC Cars

[illegible]

Modeling Linde Cars in HO Scale

[illegible]

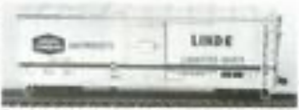
[illegible]



This view of the painted and decaled [illegible] shows the model without any touch-up or weathering. I like to use artists' oil paints with turpentine (a turpentine substitute) as weathering materials. I then add a light overspray of dust or grime to finish. Use your favorite method of weathering sparingly, as these cars received timely maintenance.

[illegible] door. Four significant items need to be added to the carbody in order to complete the Linde cars. First, add the straight side sill made from Evergreen [illegible] strip styrene. Second, cut a door at each end just above the coupler. Cut the door opening as wide as an Evergreen [illegible] strip styrene piece and as tall as the [illegible]. The door frame is two pieces of HO scale [illegible] cut to fit following the prototype photos, using the [illegible] styrene in the access door. Then, cut and place four scale [illegible] roof hatches, cut from [illegible] styrene, along the [illegible] line after filing that particular panel smooth. Note the photographs for placement, as the hatches start from the "B" (brake wheel) end, skipping one panel at a time toward the "A" end. Note that [illegible] an additional panel at the "A" end, ending with a hatch in the same panel as at the "B" end. Other Linde cars had more than four hatches. [illegible] prototype modeling project good photos of your subject [illegible] in details and construction. Fourth, the [illegible] built cars [illegible] access plates on each side of the side doors on both sides of the car. [illegible] for maintenance and inspection were needed between the tank [illegible]. These plates can be added by cutting [illegible] styrene sheet [illegible] square and [illegible]. The [illegible] Linde cars had no [illegible] removed and ladders shortened. [illegible] the [illegible] with the ladders and [illegible] in place.

Before adding the [illegible] ladders, [illegible] paint [illegible] and adding the detail parts, the [illegible] should be painted around the carbody. The [illegible] is [illegible] inches wide and [illegible] inches up from the carbody bottom. [illegible] tape to this [illegible] and mask off the [illegible] following prototype photos. [illegible] the band goes completely around the carbody. Add the detail parts, and the car can then be painted in the overall white [illegible]. The [illegible]



This side view shows the placement of the decals to finish prototype [illegible] tank car [illegible]. The cars transported several types of cryogenic liquids. I modeled the car for oxygen, adding a conductor placard and the "LIQUID [illegible]" stencil just to the lower right of the door. — All model photos by the author.

"Keep Off Roof" labels are from Microscale decal set [illegible], and the [illegible] are [illegible]. They are added as needed to match a particular car. The [illegible] Linde paint scheme decals can be ordered from the author for [illegible] per set by sending a SASE to [illegible] Mahogany Drive, [illegible]

Modeling these unusual cryogenic boxcars [illegible] can add interest and variety to your freight car fleet.

I would like to thank [illegible] Linde and [illegible] for their assistance on this article. **RMJ**

P&D Hobby Shop

[illegible]

[illegible]

NEW!
P & D
HOBBY
SPECIAL
RUN

ERIE LACKAWANNA 3 BAY
HOPPERS in Scale and Hi-Rail
Available with 12 different Road Numbers

SCALE	HI-RAIL
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]
[illegible] "EL" 3 Bay Hopper [illegible]	[illegible] "EL" 3 Bay Hopper [illegible]

Scale or Hi-Rail $29.95 each
3-Car Set (3 different road numbers) $84.95
6-Car Set (6 different road numbers) $169.90
12-Car Set (12 different road numbers) $339.80

[illegible]
[illegible]
[illegible]
[illegible]

P&D Hobby Shop

NEW P & D SPECIAL RUN WEAVER PS-1 BOX CARS

ALL CARS COME IN THREE ROAD NUMBERS, BOTH SCALE & HIGH RAIL

[illegible]

AVAILABLE IN 3 CAR SETS
SAME ROAD NAME ONE OF EACH NUMBER $84^{95} SET

[illegible]

ORIGAMI ASTON

[illegible]

[illegible]

[illegible]

Here's one good reason to buy Lionel.

Here are four more.

Whether you're just starting a railroading empire or adding to an established layout, there are always good reasons to buy Lionel. This year's exciting assortment of diesel engines give you five great reasons to get into the Lionel habit. For transporting heavy freight on eastern routes with the **Susquehanna Dash 8-40B** or running an agricultural line out west with the **Montana Rail Link SD-9**, Lionel diesel engines are built to last. Buy one or buy them all at your Lionel Authorized Value-Added Dealer today.

LIONEL

© [illegible] Lionel Trains, Inc.

[illegible]

[illegible]

[illegible]

[illegible]

Pullman-Standard 'PS2-CD' Covered Hopper

Accurately detailed custom painted hoppers are what you have been asking for. At Overland we are here to satisfy your every model railroad need. If you're looking for satisfaction and customer service... look to OMI for the answer. We want to be your model railroad importer. Each of these beautiful models is hand crafted of brass by Ajin Precision of Korea in **HO scale**.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

MILWAUKEE
ROAD

[illegible]

[illegible]

Overland Models, Inc.

[illegible]

SO WELL BEHAVED
HEAR A SQUEAK

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

YOU WON'T EVEN
FROM THE TYRES.

"Six inch tin": 2

Louis Marx & Co. completes the prewar period with enhanced lithography and new designs

[illegible]

[illegible]

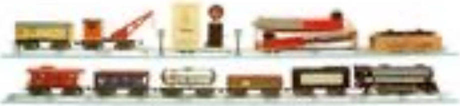


FIG. 1. [illegible]

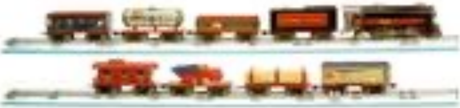


FIG. 2. [illegible]

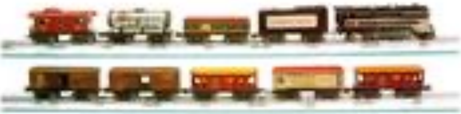


FIG. 3. [illegible]

[illegible]

[illegible] REVERSING

[illegible]

[illegible]

[illegible]

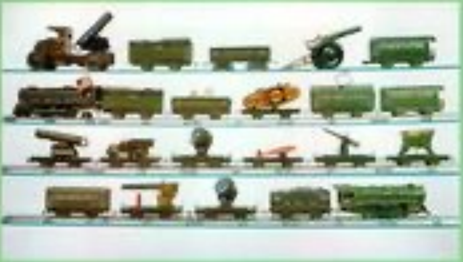
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

THE FABULOUS ARMY TRAINS

[illegible]

[illegible]

GROUP IV — CIRCA 1930-42

[illegible]

[illegible]

[illegible]

Tune up your Lionel diesel-style coal loader

Old no. 397 rocks and rolls and throws some coal

[illegible]

[illegible]

LOADING AND UNLOADING

[illegible]

BALING WIRE AND CHEWING GUM

[illegible]

The service manual says "a small number of the early 1948 models of the 397 Coal Loader were also equipped with the 79 lamp post mounted on the hopper base. This lamp post was subsequently eliminated. . . ." So was the yellow diesel motor; it's most commonly painted blue.

A typical combination of accessories involves the no. 397 Diesel-type coal loader and a no. 456 operating coal ramp.

[illegible]

BELT REMOVAL

[illegible]

[illegible]

[illegible]

[illegible]

ACCESSORY AT A GLANCE

Name and number:
[illegible]

Dimensions:
[illegible]

Relative scale:
[illegible]

Construction materials:
[illegible]

Operation:
[illegible]

Companion accessories:
[illegible]

Cataloged:
[illegible]

Significant variations:
[illegible]

General maintenance:
[illegible]

Maintenance schedule:
[illegible]

Troubleshooting:
[illegible]

Service information:
[illegible]

Current price range:
[illegible]

Relative availability:
[illegible]

Customer deficiencies:
[illegible]

Fig. 1 [illegible]

Fig. 2 [illegible]

[illegible]

BELT TIGHTENING

[illegible]

Fig. 3 [illegible]

Fig. 4 [illegible]

HO

PRR H-8, H-9 and H-10 in HO

At Your Dealer's Now

[illegible]

Amro Ltd

[illegible]

HO SCALE BRASS T1 FROM SUNSET MODELS – FACTORY PAINTED

[illegible]

WORLD'S LARGEST SELECTION OF MODEL RAILROAD PRODUCTS UNDER ONE ROOF

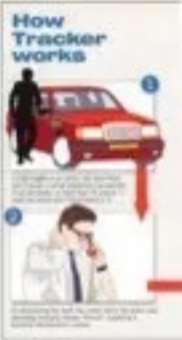
OVER 300 LINES STOCKED AT ALL TIMES, NEW ARRIVALS DAILY

[illegible]

THE STORE WITH MORE SINCE [illegible]

You can run but you can't hide

How Tracker works



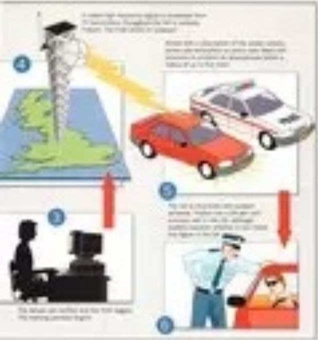
[illegible]

[illegible]

The days of easy car theft are numbered thanks to high-tech tracking devices. Peter Wilkinson reports

[illegible]

Twenty-five insurance companies have already indicated that they



[illegible]

will offer up to 10 per cent discount on vehicles fitted with Tracker

UNION PACIFIC

Union Pacific 'MK' 2-8-2 — U.S.R.A. Light

2487
UNION PACIFIC

[illegible]

'O' Scale

Overland Models, Inc.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Tracker's flaw is that the owner must report the car missing

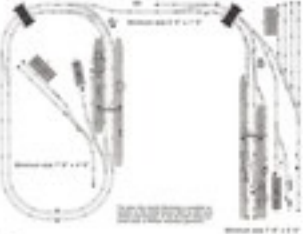
First attempt

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

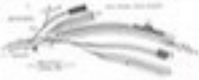
The Great North of Scotland Railway

[illegible] outlines this [illegible] for the modeller, focusing on the ex-Royal station of Ballater

[illegible]

[illegible]

[illegible]



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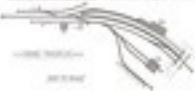
[illegible]

[illegible]



Scratchbuilding an LNWR Class C

An historic workhorse in 7mm scale

By Ray [illegible]

Photographs by [illegible]

[illegible]

Modelling Kent Coast electrics in 4mm scale — 2

The refurbished 4CEPs, part two

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Snailspeed

It's surprising just how much realism you can get in a small space!

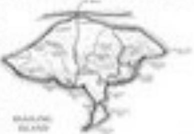
by Brian J. Thacker

Photographs by the author

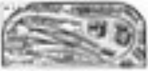
[illegible]

[illegible]

[illegible]


HAYLING ISLAND

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

OFF THE WIRE

Building a catenary system for Ron Zweig's O gauge model railroad

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] terminate the support cable just above the portal where track enters a tunnel. The [illegible] wires continue through the tunnel [illegible]

[illegible]

[illegible]

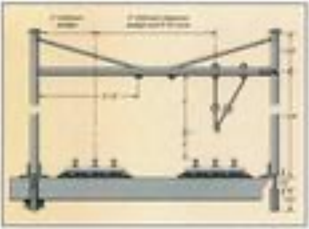
[illegible]

[illegible]

THE TOWERS

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

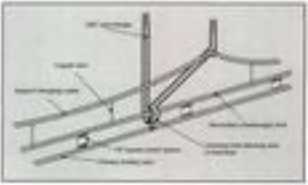
[illegible]

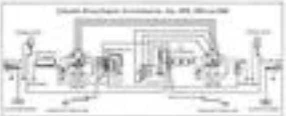
THE CATENARY

[illegible]

[illegible]

[illegible]





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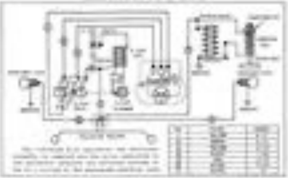


Convert your GG1 to overhead operation

[illegible]

[illegible]

[illegible]

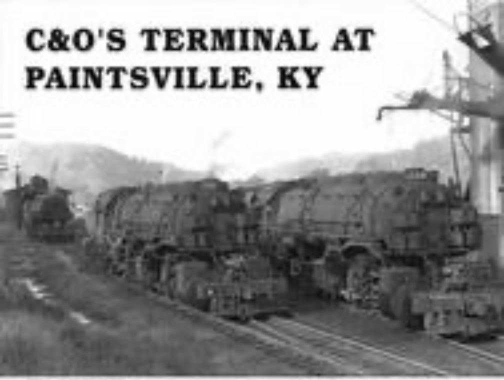
CURVES AND TENSION

[illegible]

THE ULTIMATE CHALLENGE

[illegible]

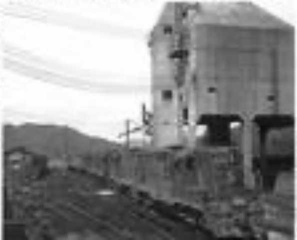
C&O'S TERMINAL AT PAINTSVILLE, KY



[illegible]

by Robert L. Hundman

[illegible]



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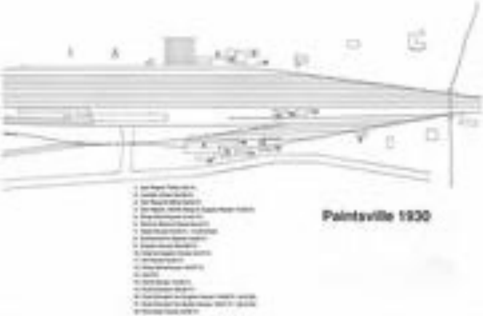
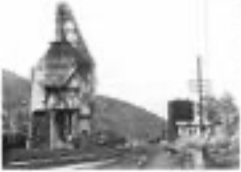
[illegible]

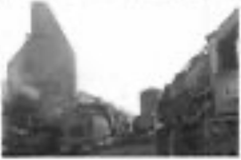
[illegible]

[illegible]



Paintsville 1930





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[illegible]

[illegible]

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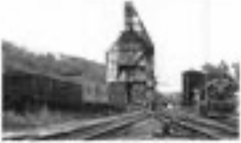
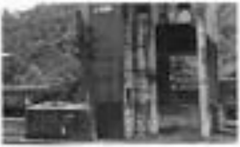
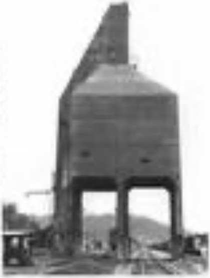
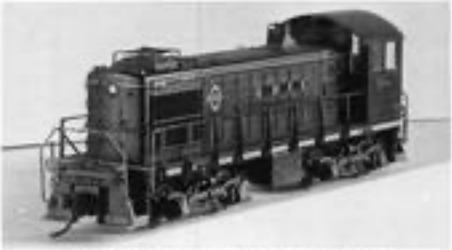
All Photos by Bruce Meyer Unless Otherwise Noted









ERIE'S ALCO S-2

by Don Hanley

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

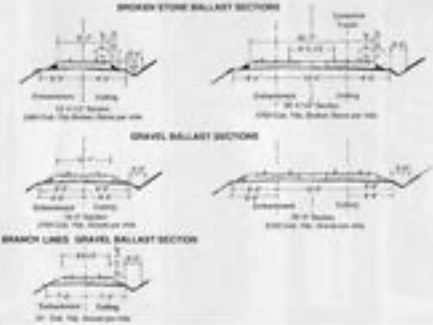
[illegible]

All Photos by the Author

Standard Plans

Canadian Pacific Railway

ROADBED & BALLAST SECTIONS


BROKEN STONE BALLAST SECTIONS
Embankment
Cutting
Embankment
Cutting
GRAVEL BALLAST SECTIONS
Embankment
Cutting
Embankment
Cutting
BRANCH LINES GRAVEL BALLAST SECTION
Embankment
Cutting

[illegible]

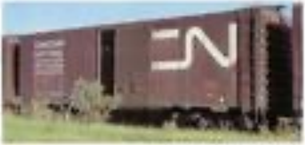
NO SCALE

CANADIAN 40-FOOT BOX CARS

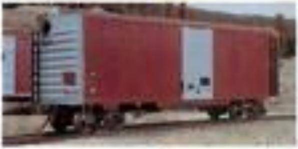
From C&BT Shops and McKean Models kits, Part III

By Stafford Swain

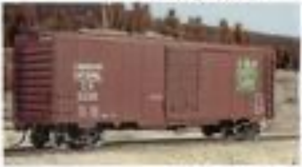
The Canadian Railway Model Parts Guild parts, shown in part II in the May 1993 issue, were used to upgrade the McKean Models box car into a precise replica of one of a specific series of Canadian National box cars. Part I of this series appeared in the December 1992 issue.



CN 526405, was a 10-foot 6-inch inside height car from "Series 26" built by National Steel Car in March 1954. This series was delivered with the then-new NSC-3 type ends, diagonal panel roof, and then-new, 6-foot Youngstown 5/6/05 doors with the later Camel door fixtures. This car has been repainted in CN's post-1960 scheme ("Type 7"), used from 1961 to date. The photo was taken by Stafford Swain on June 23, 1988 in the "F" yard area of CN's Fort Rouge (Winnipeg) yards.



CN 537508 is modeled using a Mr. Rivet of Indiana — Bay Line [illegible] Front Range [illegible] kit for [illegible] 40-foot door, 10 riveted side panels with diagonal panel roof. The NSC-3 end is a CRMPG [illegible] end casting. The Youngstown 5/6/05 door is a preliminary (made without hardware) version of CRMPG part [illegible] which, as finished, now has a [illegible] and complete door hardware. Other added details include Detail Associates brake step platform, modified ladders, grabirons, Overland roofwalk and Precision Scale's Ajax brake wheel.



A right side view of CN 537508, which is a 10-foot 6-inch inside height car from "Series 26" built by National Steel Car in April 1954. This series was delivered with CN paint scheme "3" (diagonal "Serves All Canada" green maple leaf monogram), then-new NSC-3 type ends, diagonal panel roof, Ajax brake gear, and then new, 6-foot Youngstown 5/6/05 doors with the later Camel door fixtures.

RICHARD JENKINS TYRES

[illegible]

LOW COST TYRES

[illegible]

"THIS BOOKLET CHANGED MY LIFE"

[illegible]

HDC

[illegible]

WHY PAY MORE?

- [illegible]

VEHICLE SOURCING LTD

Tel: [illegible] Fax: [illegible]

UK'S LEADING NEW CAR DISCOUNT CENTRE

[illegible]

TOP DISCOUNTS

NCC

NEW CAR CENTRE

[illegible]

[illegible]

THE GN3 LITTLE VISTA GARDEN RY.

BY GEORGE HALL

O[illegible]

Layout construction

[illegible]

[illegible]

Larry and Pam Webb make garden railroading a family activity

[illegible]

[illegible]

[illegible]

[illegible]

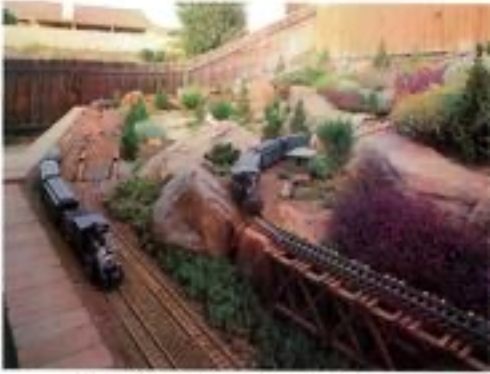
[illegible]

[illegible]

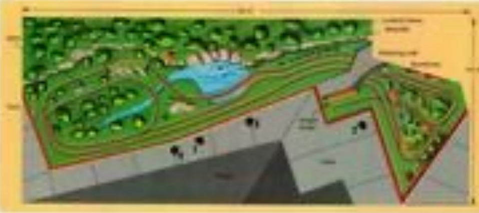
[illegible]

San Diego Garden Railway Club

[illegible]



[illegible]



[illegible]

Family activity

[illegible]

[illegible]

Future

[illegible]

Layout at a glance

[illegible]

Meet

[illegible]

Build a pair of O scale horse-drawn wagons

These easy-to-build flatbed and grocery wagons are perfect for early-1900s layouts

BY CHUCK CURTIS
PHOTOS BY THE AUTHOR

A[illegible]

[illegible]

Flatbed construction

[illegible]

Painting and weathering

[illegible]

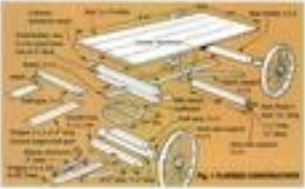


Fig. 1 FLATBED CONSTRUCTION

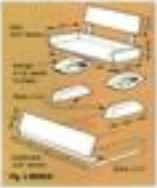
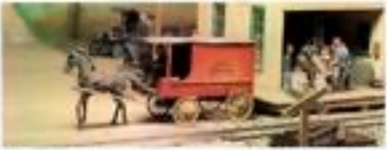


Fig. 2 BENCH



[illegible]

[illegible]

Grocery wagon

[illegible]

Painting, weathering, final details

[illegible]

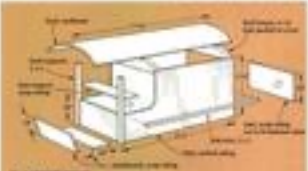


Fig. 1 GROCERY WAGON

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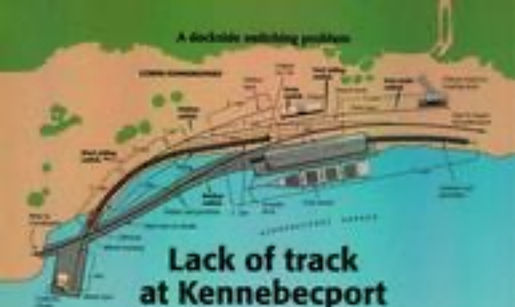

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Lack of track at Kennebecport

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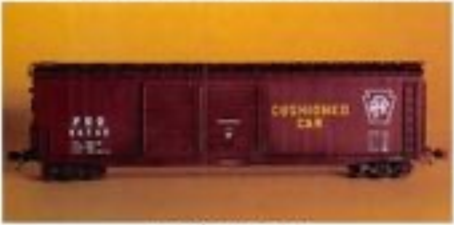
PRR
CUSHIONED
CAR

by Ed Martin

[illegible]

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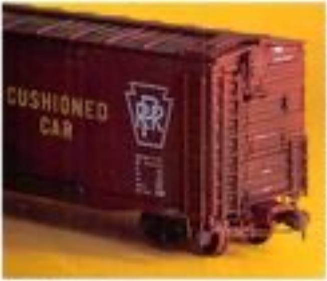
CUSHIONED
CAR

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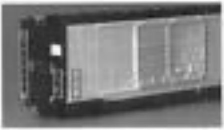

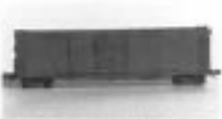

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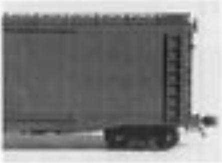
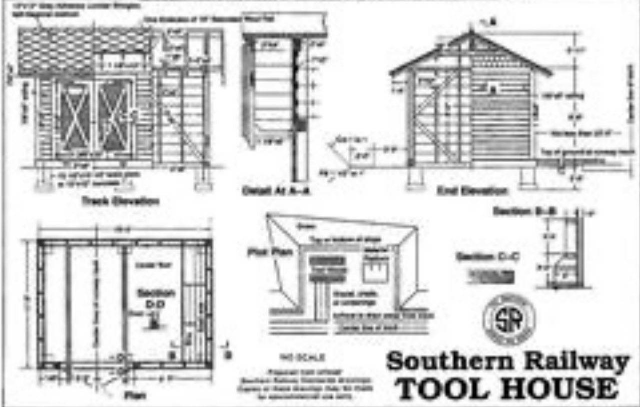


Standard Plans


Track Elevation
Detail At A-A
End Elevation
Section B-B
Section C-C
Plot Plan
Section D-D
Plan
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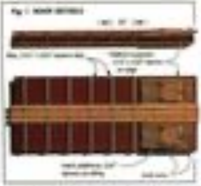

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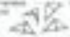

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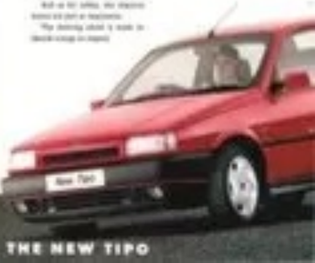
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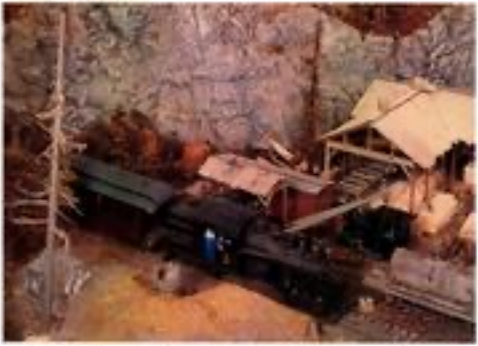
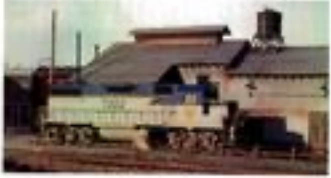


Bob Clarke, of San Antonio, Tex., gives to his [illegible] logging with [illegible] scale [illegible] from an actual 30" high. His layout will be featured in Great Model Railroads 1995, our annual magazine of fine layouts due out in November. [illegible] and the layout in person by attending the National Narrow Gauge Convention, to be held August [illegible] in San Antonio. For information write [illegible], San Antonio, TX [illegible]. George [illegible] took the photo.



The [illegible] of Delaware & Hudson no. [illegible] on a [illegible] siding. Thomas [illegible] detailed [illegible] and weathered the engine, an Atlas [illegible]. He photographed the locomotive outside on a module that's also part of the layout.

[illegible]

[illegible]

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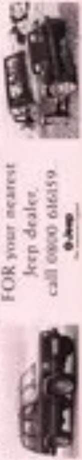
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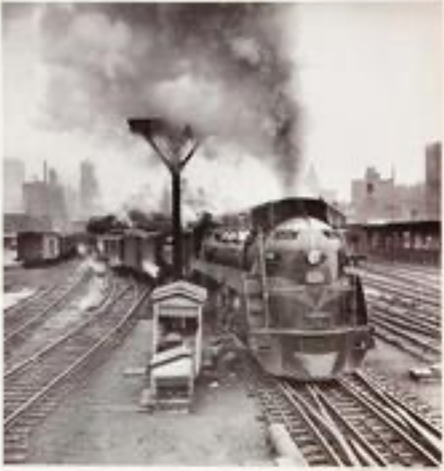

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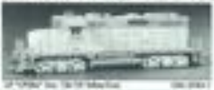

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